

Company Profile

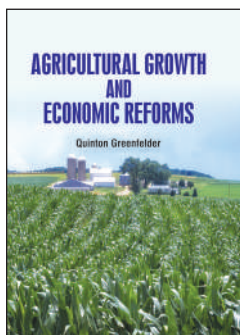
White Press Academic is committed to empowering researchers and librarians around the world. Based in the USA, White Press Academic Company was founded to meet the need of authors who, while wishing to benefit from this burgeoning new market, prefer to let a professional and knowledgeable publisher take care of their publishing requirements. Since our inception, we have helped many authors to get their books printed and many are choosing us to publish all of their titles.

We have a wide range of Life Sciences and Bioscience books including Agriculture & Agronomy, Botany, Biochemistry & Molecular Biology, Aquatic Sciences, Animal & Veterinary Science, Food Science, Entomology, Environmental Science, Genetics & Genomics, Microbiology, Zoology and many more.

Our books are designed carefully and attractively by our experts to make learning an interesting, creative and fun-filled experience.

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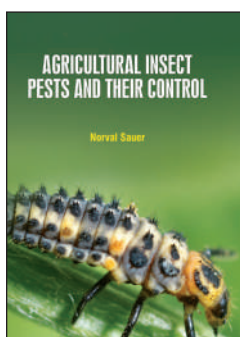


Agricultural Growth and Economic Reforms

Quinton Greenfelder

ISBN: 9781684699551 HB Price: \$ 195.00 Size: 7 × 10 Pages: 308 Year: 2020 Reprint Year: 2024

About the Book: This book examines the role of agriculture in the economic reforms of developed, developing low- and middle-income countries and explores means for accelerating agricultural growth and poverty reduction. In this book, author deal with the employment impact of alternative agricultural growth rates and land tenure systems, and impact on food security. The book provides detailed analysis of each element of agricultural modernization, emphasizing the central role of government in accelerated growth in private sector dominated agriculture. The book differs from the bulk of current conventional wisdom in its placement of the non-poor small commercial farmer at the center of growth, and explains how growth translates into poverty reduction.

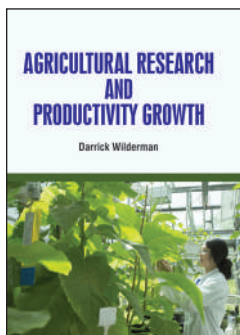


Agricultural Insect, Pests and Their Control

Norval Sauer

ISBN: 9781684699568 HB Price: \$ 195.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: A pest is an animal or plant detrimental to humans or human concerns including crops, livestock, and forestry. The term is also used of organisms that cause a nuisance, such as in the home. An older usage is of a deadly epidemic disease, specifically plague. In its broadest sense, a pest is a competitor of humanity. Pest insects can have adverse and damaging impacts on agricultural production and market access, the natural environment, and our lifestyle. Pest insects may cause problems by damaging crops and food production, parasitising livestock, or being a nuisance and health hazard to humans. This book is a companion to Agricultural Insect Pests of the Tropics and their Control. It is designed as a source of reference about most of the major insect and mite pests of agricultural crops. Students taking courses in entomology, agriculture, crop pest biology and crop protection, and professional workers concerned with identification and control of insect pests, will find this comprehensive account an indispensable book and source of reference.

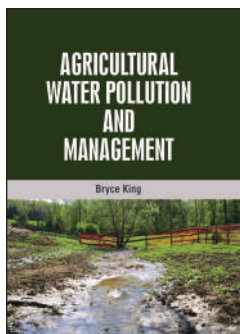


Agricultural Research and Productivity Growth

Darrick Wilderman

ISBN: 9781684699575 HB Price: \$ 185.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: Agricultural research can be broadly defined as any research activity aimed at improving productivity and quality of crops by their genetic improvement, better plant protection, irrigation, storage methods, farm mechanization, efficient marketing, and a better management of resources. Agricultural productivity is measured as the ratio of agricultural outputs to agricultural inputs. This book focuses on agricultural research and productivity growth. This book looks at results, methods, and data on international agricultural productivity for a better understanding of long-run trends and the policies that determine them. By presenting an international assessment of total factor productivity growth in agriculture, it provides a response to the rising global scarcity of agricultural production. Essential reading for researchers, policy makers and students.

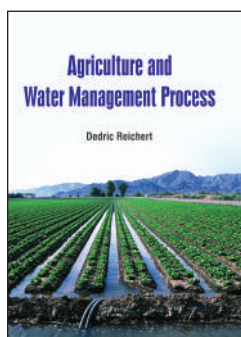


Agricultural Water Pollution and Management

Bryce King

ISBN: 9781684699582 HB Price: \$ 195.00 Size: 7 × 10 Pages: 269 Year: 2020 Reprint Year: 2024

About the Book: Agricultural operations can contribute to water quality deterioration through the release of several materials into water: sediments, pesticides, animal manures, fertilizers and other sources of inorganic and organic matter. This "guidelines" document on control and management of agricultural water pollution has the objectives of delineating the nature and consequences of agricultural impacts on water quality, and of providing a framework for practical measures to be undertaken by relevant professionals and decision-makers to control water pollution. This book introduces the major agricultural activities and their impact on soil and groundwater. It lists the basic aspects of agricultural activities and introduces soil properties, classification and processes, and groundwater characteristics, movement, and recharge aspects. It further discusses soil and groundwater pollution from various sources, impacts of irrigation, drainage, fertilizer, and pesticide. Finally, the book dwells upon conservation and management of groundwater and soil.



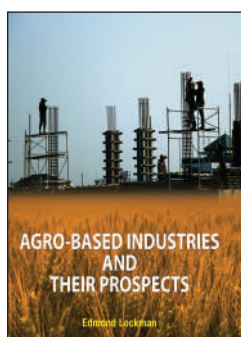
Agriculture and Water Management Process

Dedric Reichert

ISBN: 9781684699599 HB Price: \$ 190.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: Agriculture and Water Management Process advances the scientific understanding, development and application of agricultural water management through an integrated approach. This book presents a collection of recent developments and applications of agricultural water management from advanced sources. Readers will find chapters on drought, irrigation scheduling, and more. By linking these systems, this book provides the first resource to promote the synergistic and multidisciplinary activities of scientists in hydro-meteorological and agricultural sciences. As agricultural water management has gained considerable momentum in recent decades among the earth and environmental science communities as they seek solutions and an understanding of the concepts integral to agricultural water management, this book is an ideal resource for study and reference.

- Presents translational insights into drought, irrigation scheduling, weather forecasting, climate change and precipitation forecasting
- Advances the scientific understanding, development and application of agricultural water management
- Integrates geo-spatial techniques, agriculture, remote sensing, sustainable water resource development, applications and other diverse areas within earth and environmental

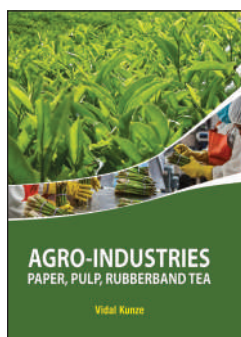


Agro-Based Industries and Their Prospects

Edmond Lockman

ISBN: 9781684699605 HB Price: \$ 230.00 Size: 7 × 10 Pages: 274 Year: 2020 Reprint Year: 2024

About the Book: The Agriculture Industry encircles a variety of procedures wherein natural resources give rise to a number of products. Agriculture Industry consists of different activities which include harvesting crops, plants, livestock feeding, grazing etc. Agriculture Industry encompasses preparing the soil for optimum returns, improving crops, services relating to horticulture, landscaping services, veterinary services, managing labors or farmers etc. Agriculture Industry is always seeking to improve, by adopting new technologies. The new technologies aim at improving the efficiency of various Agricultural based operations. This book addresses development issues for sustained economic growth and employment, policies towards trade reform, capital mobility between formal and informal sectors, informal wage structure, price structure between agricultural and industrial commodities, strategies towards industrialization suited to regional variation of relative factor intensity and relative abundance of factors of production, wage structure for gender based occupational segregation in the non-agricultural sector, agriculture-industry interaction and priority policy objectives and the like. It also exemplifies the ill of the market structure in practice to such dynamics. Due to its comprehensiveness and contemporariness, it is felt that this book would be useful for academics, students, researchers, practitioners and policy makers interested in development, in addition to being a book of teaching student particularly for macroeconomics, developing economics and political economy.

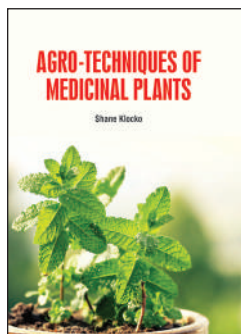


Agro-Industries: Paper, Pulp, Rubberband Tea

Vidal Kunze

ISBN: 9781684699612 HB Price: \$ 190.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: This book covers all the aspects of business, from analyzing the market, confirming availability of various necessities such as plant & machinery, raw materials to forecasting the financial requirements. This book in attempting to study various issues involved in agro-industries in specific Paper, Pulp, Rubberband and Tea, highlights evaluation of traditional processing units besides coffee curing, tea manufacturing, etc. It is hoped that the book would spell a brighter prospect for the agro units provided appropriate technology development and product and market diversification factors are duly emphasized.

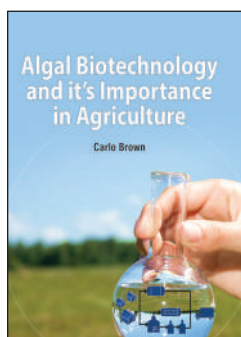


Agro-Techniques of Medicinal Plants

Shane Klocko

ISBN: 9781799601128 HB Price: \$ 230.00 Size: 7 × 10 Pages: 348 Year: 2020 Reprint Year: 2024

About the Book: Medicinal Plants or Medicinal herbs are essence of Traditional medicine practice. Treatment using herbs developed different parts of world in different names. Herbalism is the systematic study of medicinal herbs and its botany. Ethnomedicine is the study of traditional medicine. Researchers identify and separate various active chemicals in the medicinal plants. This invaluable book consisting of different chapters contributed every aspects related to the cultivation of medicinal plants. The book explains cultivation details of most trees, shrubs, climbers and herbs covering different species. Each plant species has been described with their common name, scientific name, family, importance, distribution, medicinal uses, botanical description, soil and climatic requirements and cultural practices. This book is a ready manual and information database for academia, exporters, extension workers, manufacturers, growers and general readers interested in medicinal plants. The professionals, teachers, folk healers, practitioners and medicinal plant growers are also likely to be benefited. The present book is aimed to create a combined collection of study material for professionals, researchers and students to understand agro-techniques of medicinal plants.

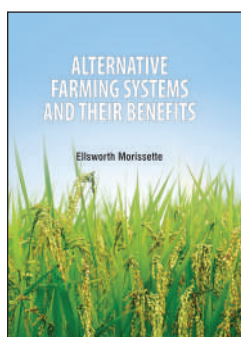


Algal Biotechnology and its Importance in Agriculture

Carlo Brown

ISBN: 9781684699636 HB Price: \$ 190.00 Size: 7 × 10 Pages: 274 Year: 2020 Reprint Year: 2024

About the Book: Biotechnology is already employed in sequencing and annotating the genomes of algal species. Genomic data aids researchers in understanding the metabolic processes through which algae convert carbon and nutrients into lipids or carbohydrates. Greater understanding of algal metabolism and reactions to growth conditions will inform further research. Genetic engineering techniques currently used in plant and microbial biotechnology, including synthetic biology and metabolic engineering, are then employed to enable algae to more predictably produce desired lipids for biofuels, alcohols, proteins, enzymes and other molecules, or carbohydrate-rich biomass for bioprocessing. The book treats the biological fundamentals of microalgal biotechnology in physiology and molecular biology and provides an overview of applications and products. It furthermore includes a survey of the state-of-the-art in process engineering of algae cultivation starting with mass production in open ponds and leading you to advanced technologies in closed photobioreactors. Thus crucial enabling technologies reaching from genetic manipulation to bioprocess engineering are reviewed. This book will be of interest to active people in biology, biotechnology, and engineering in the area of sustainable production of high value products or mass production of food and fuel for the future.

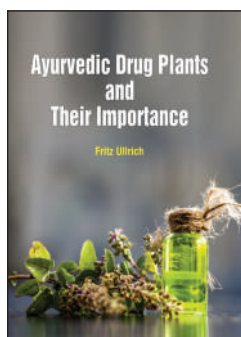


Alternative Farming Systems and Their Benefits

Ellsworth Morissette

ISBN: 9781684699643 HB Price: \$ 190.00 Size: 7 × 10 Pages: 284 Year: 2020 Reprint Year: 2024

About the Book: Sustainable agriculture is a quickly rising field aiming at producing food and energy in a bearable approach for our children. This discipline discourses recent issues such as climate change, increasing food and fuel prices, starvation, obesity, water pollution, soil erosion, fertility loss, pest control and biodiversity depletion. New solutions are proposed based on integrated knowledge from agronomy, soil science, molecular biology, chemistry, toxicology, ecology, economy, philosophy and social sciences. As real society issues are now intertwined, sustainable agriculture will bring solutions to shape a safer world. This book examines current agricultural issues, and proposes alternative solutions, consequently helping all scientists, decision-makers, professors, farmers and politicians wishing to build safe agriculture, energy and food systems for future generations.

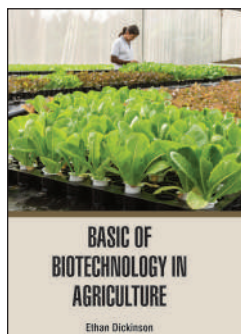


Ayurvedic Drug Plants and Their Importance Basics of Biotechnology in Agriculture

Fritz Ullrich

ISBN: 9781684699681 HB Price: \$ 190.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Ayurveda entails a scientific tradition of harmonious living and its origin can be traced from ancient knowledge in Rigveda and Atharvaveda. Ayurveda is a traditional healthcare system of Indian medicine since ancient times. Several Ayurvedic medicines have been exploiting for treatment and management of various diseases in human beings. The several drugs have been developed and practiced from Ayurveda since ancient time to modern practice as 'tradition to trend'. The potential of Ayurvedic medicine needs to be explored further with modern scientific validation approaches for better therapeutic leads.

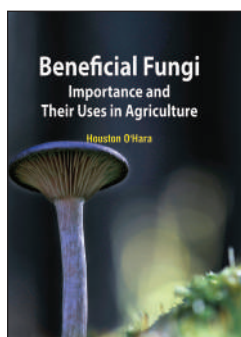


Basic of Biotechnology in Agriculture

Ethan Dickinson

ISBN: 9781684699698 HB Price: \$ 190.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Like any other area in science, both the scope and depth of our knowledge of Biotechnology and Agriculture are rapidly expanding. Agricultural Biotechnologies are continuously making new discoveries. Agricultural biotechnology plays a significant role in developing agriculturally important crops that provide high yield with enhanced nutritional value and show improved resistance to pathogens. The book is a comprehensive reference work on agricultural biotechnology. It brings together the principles and contemporary agricultural biotechnology. Modern biotechnology has great potential to influence and benefit agriculture. This text is suitable for the under-graduate and postgraduate students of agriculture and biotechnology. It will also be useful to researchers and agronomists.

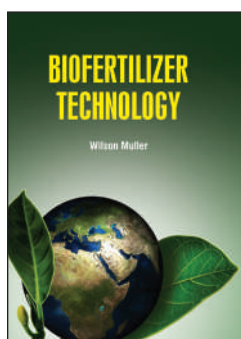


Beneficial Fungi: Importance and Their Uses in Agriculture

Houston O'Hara

ISBN: 9781684699704 HB Price: \$ 190.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Fungus, plural fungi, any of about 144,000 known species of organisms of the kingdom Fungi, which includes the yeasts, rusts, smuts, mildews, molds, and mushrooms. Fungi are among the most widely distributed organisms on Earth and are of great environmental and agricultural importance. Many fungi are free-living in soil or water; others form parasitic or symbiotic relationships with plants or animals. This book blends information on classical fundamental aspects with recent development in fungal systematics. The book of Beneficial Fungi: Importance and Their Uses in Agriculture presents information on the morphology, life cycle and their uses in human life. This eminent work covers all perfect and realistic features of fungi in an interesting manner. This work is bound to create new waves in the discipline.

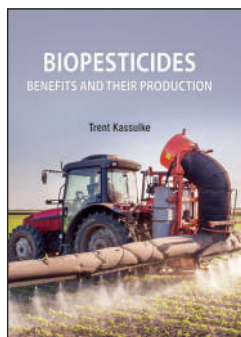


Biofertilizer Technology

Wilson Muller

ISBN: 9781799601135 HB Price: \$ 230.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Biofertilizers are seen as an important alternative technology, since the negative externalities of chemical fertilizers have become well known. Biofertilizer is a substance which contains living microorganisms which, when applied to seed, plant surfaces, or soil, colonizes the rhizosphere or the interior of the plant and promotes growth by increasing the supply or availability of primary nutrients to the host plant. Biofertilizers add nutrients through the natural processes of nitrogen fixation, solubilizing phosphorus, and stimulating plant growth through the synthesis of growth-promoting substances. Biofertilizers can be expected to reduce the use of chemical fertilizers and pesticides. This book provides the view of immense potential of biofertilizers as a supplementary nutrient source for the crops and covers all major types of bacterial fertilizers. Importance of nitrogen fixation and major utilities of fertilizers in agro-based industries are given. The major contents of this book is crop response to biofertilizers, nitrogen fixation, phosphate solubilising microorganisms, application and evaluation techniques, biogas production, production, quality control, and future research planning of biofertilizers. This book will be of immense use and interest to consultants, researchers, libraries, and entrepreneurs, manufacturers of biofertilizers and for those who want to venture in to this field

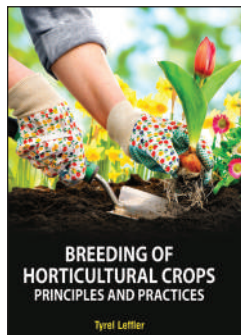


Biopesticides: Benefits and Their Production

Trent Kassulke

ISBN: 9781684699728 HB Price: \$ 190.00 Size: 7 × 10 Pages: 282 Year: 2020 Reprint Year: 2024

About the Book: The content of this book is designed to provide basic information in the areas of agricultural sciences for sustainable development and ecofriendly practices. The subject matter of this book has been conceived and presented with aim as an introductory source to the sustainable agriculture to bring the awareness about the essential functional microbial life in the soil and emerging trends and approaches in the field of agricultural sciences. This book titled Biopesticides: Benefits and Their Production is an attempt to understand biopesticides in a comprehensive way. Therefore, it provides readers with some of the basic principles of biopesticides. Biopesticides: Benefits and Their Production is a comprehensive book useful for students, researchers, scientists, farmers including policy makers following concepts of sustainable agricultural.

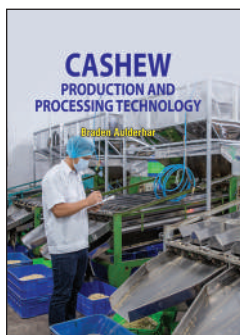


Breeding of Horticultural Crops: Principles and Practices

Tyrel Leffler

ISBN: 9781684699742 HB Price: \$ 190.00 Size: 7 × 10 Pages: 288 Year: 2020 Reprint Year: 2024

About the Book: The book fully expanded edition has been specially written with the hope that it may provide a satisfactory guidance for students of agriculture and horticulture including applied botany and also for the horticultural enthusiasts. More emphasis has been given in this book to explain the principles and methods of breeding of important Horticulture Crops and also the achievements made in these crops in the development of new cultivars. The book has been designed with the main consideration to serve a dual purpose of being a text and reference. Keeping this thing in mind the entire book has been divided into three major chapters. The first chapter deals with the principles and methods of breeding adopted in horticultural crops propagated both sexually and asexually. The second chapter deals with the achievements in breeding of perennial horticultural crops. The third chapter covers achievements made in breeding of annual horticultural crops.

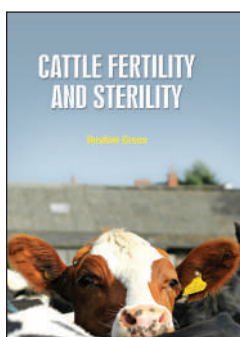


Cashew: Production and Processing Technology

Braden Aufderhar

ISBN: 9781684699759 HB Price: \$ 195.00 Size: 7 × 10 Pages: 280 Year: 2020 Reprint Year: 2024

About the Book: Medicinal plants are the most important source of life saving drugs for the majority of the world's population. The biotechnological tools are important to select, multiply and conserve the critical genotypes of medicinal plants. In-vitro regeneration holds tremendous potential for the production of high-quality plant-based medicine. Medicinal plants are the most important source of life saving drugs for the majority of the world's population. The biotechnological tools are important to select, multiply and conserve the critical genotypes of medicinal plants. In-vitro regeneration holds tremendous potential for the production of high-quality plant-based medicine. Medicinal and aromatic plants constitute a major segment of the flora, which provides raw materials for use in the pharmaceuticals, cosmetics, and drug industries. The indigenous systems of medicines, developed in India for centuries, make use of many medicinal herbs. These systems include Ayurveda, Siddha, Unani, and many other indigenous practices. More than 9,000 native plants have established and recorded curative properties and about 1500 species are known for their aroma and flavour. This book will cater to the immediate needs of the students, researchers, faculty members and pharmaceutical industries.

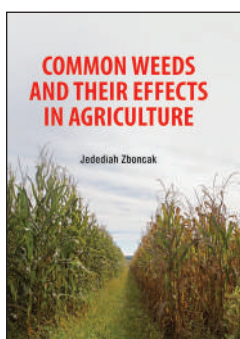


Cattle Fertility and Sterility

Ibrahim Green

ISBN: 9781799600374 HB Price: \$ 249.00 Size: 7 × 10 Pages: 312 Year: 2020 Reprint Year: 2024

About the Book: Improving fertility will increase the efficiency of dairy production. This is beneficial for the environment, economic viability and animal welfare. An improvement of reproductive performance for dairy cattle production will shorten the calving interval, increase the lifetime of a cow, lower insemination efforts and diminish veterinary treatments. Modern dairy cows may have high milk yields, but fertility and calving performance have suffered due to intensive genetic selection. The sustainability of dairy cattle farming relies on the ability of cows to continue producing offspring while coping with environmental constraints. Sterility is the physiological inability to effect sexual reproduction in a living thing, members of whose kind have been produced sexually. Sterility has a wide range of causes. It may be an inherited trait, as in the mule; or it may be acquired from the environment, for example through physical injury or disease, or by exposure to radiation. Dairy cow herd sterility is nowadays considered pathological syndrome, and is part of everyday dairy cattle pathology, it is not a disease sui generis. Etiology of herd infertility is complex and includes several groups of factors. Factors that cause herd sterility are alimentary, hereditary, hormonal, infectious, environmental and insemination errors. In the etiology of herd infertility scarce and unbalanced diet dominates in 40 to 75 percent. Due to the complex etiology in treatment of herd infertility no general and unique prescription exists. Increased milk production and selection of cows for the production level of over eight thousand liters of milk in lactation This book apart from meeting the professional needs of U.G, P.G, teachers, scientists, clinicians of veterinary universities/colleges will also served as a reference book for field veterinarians. Present book has been complete to cater to the requirements of the teachers, researchers and students.



Common Weeds and Their Effects in Agriculture

Jedediah Zboncak

ISBN: 9781684699766 HB Price: \$ 195.00 Size: 7 × 10 Pages: 318 Year: 2020 Reprint Year: 2024

About the Book: Weeds affect everyone and should be of concern to all. The nature of weeds and how they interact with human activities form the basis of the discipline of weed science. Weeds may poison livestock or seriously slow their weight gain. They can cause allergic reactions in humans, such as hay fever and dermatitis. Weeds create problems in recreational areas such as golf courses, parks, and fishing and boating sites. The book will augment the basic knowledge of the students, Extension Workers and the Agricultural Experts fighting for a greener Vision and Mission of the country for producing better quality and quantity of crop yields, and providing better health, nutrition and balanced diet of the people.

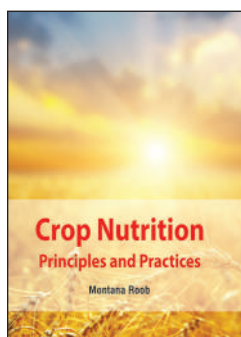


Control of Fungal Plant Pathogens in Agricultural Biotechnology

Tyler Kirlin

ISBN: 9781684699773 HB Price: \$ 205.00 Size: 7 × 10 Pages: 276 Year: 2020 Reprint Year: 2024

About the Book: Medicinal plants are the most important source of life saving drugs for the majority of the world's population. The biotechnological tools are important to select, multiply and conserve the critical genotypes of medicinal plants. In-vitro regeneration holds tremendous potential for the production of high-quality plant-based medicine. Medicinal plants are the most important source of life saving drugs for the majority of the world's population. The biotechnological tools are important to select, multiply and conserve the critical genotypes of medicinal plants. Biotechnology offers several choices through which secondary metabolism in medicinal plants can be altered in innovative ways, to overproduce phytochemicals of interest, to reduce the content of toxic compounds or even to produce novel chemicals. Medicinal and aromatic plants constitute a major segment of the flora, which provides raw materials for use in the pharmaceuticals, cosmetics, and drug industries. The indigenous systems of medicines, developed in India for centuries, make use of many medicinal herbs. These systems include Ayurveda, Siddha, Unani, and many other indigenous practices. More than 9,000 native plants have established and recorded curative properties and about 1500 species are known for their aroma and flavour. This book will cater to the immediate needs of the students, researchers, faculty members and pharmaceutical industries.

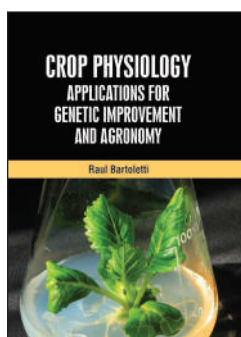


Crop Nutrition: Principles and Practices

Montana Roob

ISBN: 9781684699780 HB Price: \$ 205.00 Size: 7 × 10 Pages: 288 Year: 2020 Reprint Year: 2024

About the Book: Crops need nutrients for satisfactory growth and quality production. Isotopes help improve crop nutrition and identify crops well-adapted to low soil fertility or particularly efficient at utilizing nutrients. This is crucial to optimize yield and quality and to improve the crops' resilience to climate change. The improved management of crop nutrients can enhance the bio-availability of macro- and micro-nutrients in crops and grains, a prerequisite for satisfactory crop growth and optimum quantity and quality yields. This book will be useful to the students, researchers and teachers in agronomy, soil science, plant physiology, microbiology, horticulture, vegetable science, floriculture, microbiology and agricultural extension and others interested in crop production.

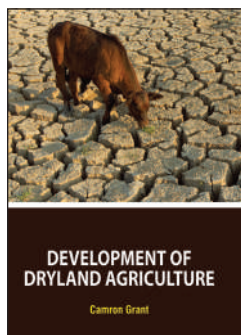


Crop Physiology: Applications for Genetic Improvement and Agronomy

Raul Bartoletti

ISBN: 9781799600114 HB Price: \$ 210.00 Size: 7 × 10 Pages: 292 Year: 2020 Reprint Year: 2024

About the Book: Crop physiology is important to appreciate the structural economy or the efficiency of biological structures. The chloroplast and mitochondria are submicroscopic organelles, which bring about energy conversions so efficiently that man, made solar panels; hydroelectric and atomic power plants are far less efficient in terms of ratio of energy generated per unit space. Thus, Crop physiology offers an opportunity to view this intricate and finely interwoven fabric of interplay of functions- the gossamer of life. However, transpiration is tightly controlled. The atmosphere to which the leaf is exposed drives transpiration, but it also causes massive water loss from the plant. Up to 90 percent of the water taken up by roots may be lost through transpiration. Intensive crop farming is a modern form of intensive farming that refers to the industrialized production of crops. Intensive crop farming's methods include innovation in agricultural machinery, farming methods, genetic engineering technology, techniques for achieving economies of scale in production, the creation of new markets for consumption, patent protection of genetic information, and global trade. These methods are widespread in developed nations. It is in the treatment of different agricultural systems and developing green agriculture that this book really scores and makes enormous impacts upon the reader.

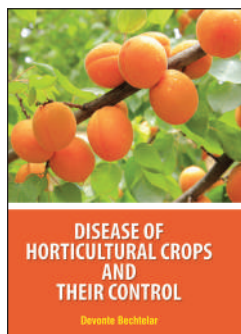


Development of Dryland Agriculture

Camron Grant

ISBN: 9781684699797 HB Price: \$ 195.00 Size: 7 × 10 Pages: 302 Year: 2020 Reprint Year: 2024

About the Book: During recent decades of research by a agricultural scientist working in the dryland and rainfed agriculture, many new technologies have been devised to aid farmers in soil and water conservations, cropping sequences system, contingent crop planning, agronomic practices, nutrient management and fertilizing their crops more effectively. Dryland agricultural systems are inherently fragile. The variability in precipitation and at low quality of many arid-zone soils leads to variable and low yields and large fluctuations in farmers' income. Farmers have always sought insurance against such variations, in particular against catastrophic years that could bring about famine and migration. This book is useful addition to the literature and would be useful for general use of the scientists in the literature and would be beneficial for general use to the scientists in the basic stream, agricultural scientists, students and for the person engaged in NGO's associated with soil, water conservation, cropping system, nutrient management, cropping system, contingent crop planning in dryland/rainfed agriculture.

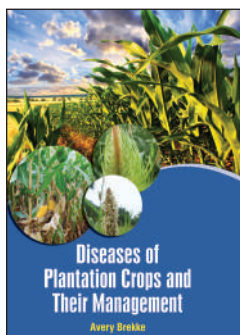


Disease of Horticultural Crops and Their Control

Devonte Bechtelar

ISBN: 9781684699810 HB Price: \$ 205.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: Horticulture is fast emerging as a major commercial venture, because of higher remuneration per unit area and the realization that consumption of fruits and vegetables is essential for health and nutrition. In the last one decade, export potential of horticultural crops has also significantly increased attracting even multinationals into floriculture, processing and value added products. Diseases of horticultural crops continue to cause losses of about 10% of the crop yields worth more than 15,000 crores annually. The information on fungal diseases of horticultural crops is very much scattered. There is no such book at present which comprehensively and exclusively deals with the above aspects on horticultural crops. The present book deals with distribution, symptoms, host range, life cycle, spread, survival and management of fungal diseases in horticultural crops in detail using regulatory, physical, cultural, chemical, biological, host plant resistance and integrated methods. The book is extensively illustrated with excellent quality photographs enhancing the quality of publication. Further, it is a useful reference to policy makers, research and extension workers and students. The material can also be used for teaching under-graduate and post-graduate courses.

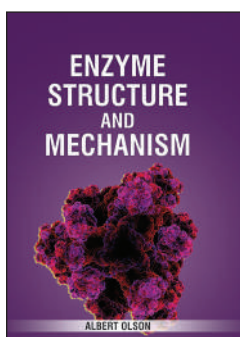


Diseases of Plantation Crops and Their Management

Avery Brekke

ISBN: 9781799600305 HB Price: \$ 190.00 Size: 7 × 10 Pages: 292 Year: 2020 Reprint Year: 2024

About the Book: Disease play a very crucial role in the production of plantation crops. Plantation Crops are defined as a group of commercial crops of (i) perennial nature, (ii) cultivated extensively in tropical and subtropical situations which (iii) need employment of labour throughout the year and the produce of which is usually consumed after processing. Plantation crops may be defined as 'tropical crops grown on a large scale by a uniform system of cultivation under central management. In general 'Plantation crops are those cultivated on an extensive scale in large contiguous area owned and managed by an individual or a company. Again in the ICAR, the nodal research organization in the country the Central Plantation Crops Research Institute has been dealing with coconut, arecanut, oil palm, palmyrah palm and cashew. Even Oil Palm, a plantation crop with similar growth habit, upkeep like coconut (which also yield oil) is often erroneously clubbed with oil seed crops. Many examples exist of where one or more species of either indigenous or exotic pests or diseases have caused devastating losses to forests, requiring changes in management regimes or forcing forest managers to switch to alternative tree species. Description on important disease include the symptoms, aetiology, host pathogen interactions, environmental relationship and integrated disease management.

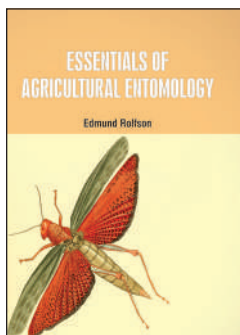


Enzyme Structure and Mechanism

Albert Olson

ISBN: 9781799600688 HB Price: \$ 225.00 Size: 7 × 10 Pages: 316 Year: 2020 Reprint Year: 2024

About the Book: For a long time, enzymes have been studied by measuring their activity, which has led to the advancement of "enzyme kinetics." Most chemical catalysts catalyse a wide range of reactions. They are not usually very selective. In contrast enzymes are usually highly selective, catalysing specific reactions only. This specificity is due to the shapes of the enzyme molecules. An enzymes is a protein that facilitates a cellular metabolic process by lowering activation energy (E_a) levels in order to catalyze the chemical reactions between biomolecules. Some enzymes reduce the activation energy to such low levels that they actually reverse cellular reactions. Enzymes are made up of amino acids which are linked together via amide (peptide) bonds in a linear chain. The specific order of amino acids in the protein is encoded by the DNA sequence of the corresponding gene. Enzyme mechanisms are the chemical transformations, and the steps within them, generated by enzymatic action on substrates. The mechanism of enzyme catalysis is similar in principle to other types of chemical catalysis, for instance by involving a combination of several different types of catalysis. Determining enzyme mechanisms includes determining their kinetic and thermodynamic properties. The book covers the structure and mechanism of enzymes, creating a guide to the current understanding of enzymology.

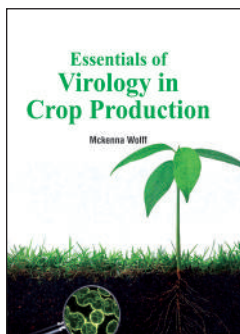


Essentials of Agricultural Entomology

Edmund Rolfsen

ISBN: 9781799601333 HB Price: \$ 230.00 Size: 7 × 10 Pages: 312 Year: 2020 Reprint Year: 2024

About the Book: Entomology is the study of insects and their relationship to humans, the environment, and other organisms. The study of insects serves as the basis for developments in biological and chemical pest control, food and fiber production and storage, pharmaceuticals epidemiology, biological diversity, and a variety of other fields of science. This book furnishes a detailed account of basic as well as applied entomology. The book provides an outline of various aspects of the science of entomology in subjective form. The book has been designed so as to expose the students to all the important examinations of entomology. It is also useful to teachers to keep them abreast with recent developments in entomology and guide their students to a better future. This exceptional book will be of great value to BSc, MSc and Diploma students on courses in biological sciences, agricultural and horticultural sciences. It will also be beneficial to Postgraduate and postdoctoral researchers working in applied entomology and crop protection. Professional entomologists and crop protection specialists working in research establishments and the agrochemical industry, and libraries in establishments where any of the above are based, should have copies of this book readily accessible on their shelves.

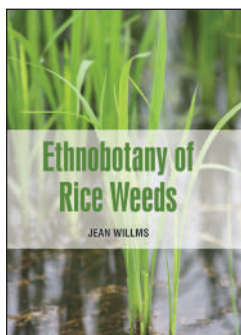


Essentials of Virology in Crop Production

Mckenna Wolff

ISBN: 9781684699834 HB Price: \$ 185.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: With regards to virus control counteractive action is the main choice. A definitive objective in plant virus sickness control is in this manner to anticipate virus spread by either controlling the vectors or through the destruction of tainted plants. To secure the enthusiasm of ranchers, the farming business, just as national and global exchange, it is significant that nurseries and tissue culture research centers give solid virus free engendering material. This book spreads examines on all parts of plant viruses including viral structure, quality capacity, hereditary qualities, virus have associations, viral pathogenesis, the study of disease transmission, have opposition, RNA hushing, etc. Additionally this area distributes concentrates including helpful methodological application, for example, diagnostic technology and metagenomics.

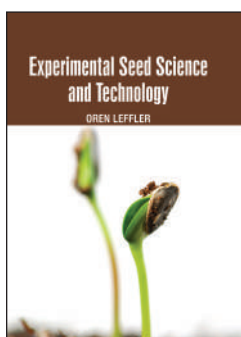


Ethnobotany of Rice Weeds

Jean Willms

ISBN: 9781684699841 HB Price: \$ 195.00 Size: 7 × 10 Pages: 366 Year: 2020 Reprint Year: 2024

About the Book: Rice continues to be the most important food source in the world, with about 20% of the global population depending on it as a staple food. This book highlights the main findings, conclusions and recommendations of both workshops. From these events it was once again clear that an integrated weed management approach is urgently required in order to improve rice production. Various preventative, cultural, physical and chemical methods should be rationally integrated to achieve the desired weed control. This book will help to enrich the knowledge of young researchers in various field of agriculture and in particular, agronomy, as well as to the teachers and researchers of the agricultural universities/research organizations. The available information together in one book will contribute to the advancement of knowledge on rice science.

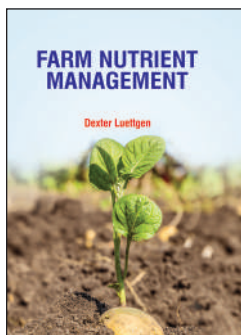


Experimental Seed Science and Technology

Oren Leffler

ISBN: 9781684699858 HB Price: \$ 195.00 Size: 7 × 10 Pages: 306 Year: 2020 Reprint Year: 2024

About the Book: Seed is the best wagered of nature against the desolates of time and every single other difficulty. Man began valuing the extraordinary and tremendous capability of seeds long time prior; further he conceived advancements to saddle the in situ capability of seeds. The job of seed and seed innovation in improving the nation's nourishment creation needs no overemphasis. Today, seeds are praised as a fundamental apparatus for verified nourishment supply, a transporter of new innovations, et cetera. Never the less, the seed business has developed into a tyrant of current agribusiness. The book would be also use full and instructive to stake holders for planning and execution in seed industry as an efficient way.

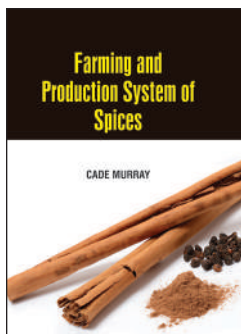


Farm Nutrient Management

Dexter Luetgten

ISBN: 9781799600435 HB Price: \$ 195.00 Size: 7 × 10 Pages: 320 Year: 2020 Reprint Year: 2024

About the Book: Farm management is the study of the business principles in farming. It may be defined as the science of the organization and management of a farm enterprise for the purpose of securing the greatest continuous profit. Plant nutrient management is critical to the sustainability of agricultural production systems. Nitrogen, phosphorus, potassium and sulfur are the four macronutrients required for crop growth. In order to maintain agricultural sustainability, nutrients that are removed from the soil by crops must be replaced. Different crops have different nutrient demands and the proportion of nutrients taken up by the plant may not be the same as that exported. Probably the most challenging aspect of developing and implementing a farm nutrient management plan is the advance planning of manure applications to cropland fields. This involves estimating the amount of manure produced on the farm and then planning specific manure application rates for individual cropland fields. Sounds challenging—and it is, but there are some tricks to the trade. The best way to find out what methods of farm organization and management are most successful is to study the methods now used and the profits secured on large numbers of farms, and determine how the more successful ones differ from the less successful, and find to which of the differences is due.

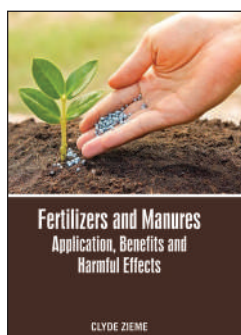


Farming and Production System of Spices

Cade Murray

ISBN: 9781684699865 HB Price: \$ 210.00 Size: 7 × 10 Pages: 292 Year: 2020 Reprint Year: 2024

About the Book: As the majority of the world's spices come from South East Asia, the spice trade helped drive the global economy starting in the Middle Ages. The Silk Road was a dangerous and long trade route that went from China to Europe. Spices are being attracted by the consumer's, both in the domestic as well as in the international market. In the culinary arts, the word spice refers to any dried part of a plant, other than the leaves, used for seasoning and flavoring a recipe, but not used as the main ingredient. The book 'Farming and Production System of Spices' contains basic information in a very concise form, easy to understand on importance, scope, problems, future strategies and production management on eminent spices viz., Black pepper, Turmeric, Ginger, Garlic, Coriander, Cumin, Black caraway, Fennel, Fenugreek, and Chilli. As the spices determine the health, wealth and policies of the nation, this book tries to analyse these aspects on the basis of the prevailing situation of this sector. The book will serve as basic guide to students of horticulture discipline, extension workers, university professors, scientists, spice growers and traders and those who are in need of information on production management and to those interested in adopting this venture as a way of life.

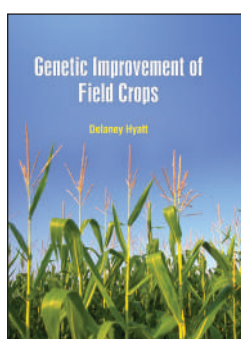


Fertilizers and Manures: Application, Benefits and Harmful Effects

Clyde Zieme

ISBN: 9781684699872 HB Price: \$ 195.00 Size: 7 × 10 Pages: 318 Year: 2020 Reprint Year: 2024

About the Book: Despite the considerable progress made in enhancing the capacity of soils to produce crops through the use of manures and fertilizers, there are yet a large number of ignorant peasants in many Asian countries, who have been growing crops without applying adequate amounts of manures and fertilizers to their crop fields and consequently obtaining considerably less yields. Accordingly, knowledge of farmyard manure, compost, fertilizers and other agricultural by-products and their applications is indispensable. The present book is a sincere effort in disseminating information on manures and fertilizers. Primarily designed as a reference book, its wide coverage includes varied manures and their preparation and effects; and production and consumption of various fertilizers along with the detailed elucidation of their properties, use, advantages and disadvantages. Application of both manures and fertilizers separately and in combination has been explained in depth in reference to individual crops of extensive variety. Owing to its reader-friendly approach to the subject, simple language and lucid style, the book is accessible even to average readers. While it ideally caters to the academic needs of undergraduate and postgraduate students of agriculture science, it is a lasting valuable reference source for researchers and teachers, peasants, geologists and soil surveyors.

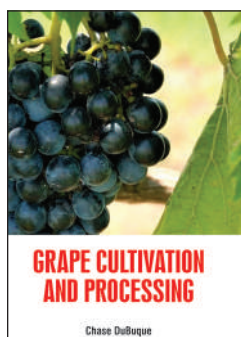


Genetic Improvement of Field Crops

Delaney Hyatt

ISBN: 9781799600312 HB Price: \$ 195.00 Size: 7 × 10 Pages: 306 Year: 2020 Reprint Year: 2024

About the Book: Opportunities exist for increasing food production in a sustainable manner through the genetic improvement of field crops. One of the potential tools for improvement of the crop performance is the genetic alteration and selection. The plants making up the miscellany known as 'field crops' are distributed throughout the families of the flowering plants almost haphazard. The qualities which make them valuable in industry or as food for man or stock, such characters as the production of fleshy roots or shoots, starchy or oily seeds, long fibres, etc., are usually of little or no importance to the botanist tracing phylogenetic relationships (although when correlated with wider ecological and soil studies they may be of fundamental interest) and, in consequence, the study of field crop plants has been seriously neglected by academic botanists. This process of domestication involved the identification of certain useful wild species combined with a process of selection that brought about changes in appearance, quality, and productivity. The exact details of the process that altered the major crops is not fully understood, but it is clear that the genetic changes were enormous in many cases. In fact some crop plants have been so changed that for many of them, maize, for example, their origins are obscure, with no extant close wild relatives. This book will be of immense use for all the students offering the course.

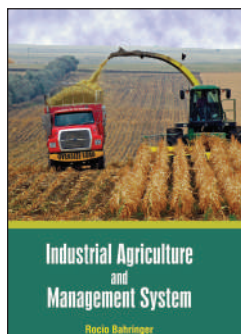


Grape Cultivation and Processing

Chase Dubuque

ISBN: 9781799600206 HB Price: \$ 185.00 Size: 7 × 10 Pages: 310 Year: 2020 Reprint Year: 2024

About the Book: Grape is one of the most important fruit crops of the world and it contains many of the most valuable elements necessary for life. The crop has a wide adaptability, and grapes can be grown under temperate, sub-tropical and tropical climatic conditions and varied agro-ecological settings. The food, nutrition, medicinal and economic values of the crop could be of significant importance for the population of the Region. Therefore, the Consultation recommended that every effort should be made to realize the full agricultural potential of the crop. Some countries in the Region have experience in the ability of rootstocks to tolerate adverse soil conditions and the positive impact of rootstocks on fruit quality and vine fruit yield. Grapes can be eaten as fresh or used for making jam, juice, jelly, vinegar, wine, grape seed extracts and grape seed oil. Approximately 71% of world grape production is used for wine, 27% as fresh fruit, and 2% as dried fruit. However, in India, 90% of the grape is used for table purpose, even though wine making has made strides. The rest of the grape is used mostly for raisin. This book is a compilation of terms related to the science, production and various aspects of grapes. This book attempts to cover words and phrases from all aspects of grapes. Hence, the book is stimulatory and useful guide to farmers, students, teachers, industrialists, business mans and scientists in viticulture.

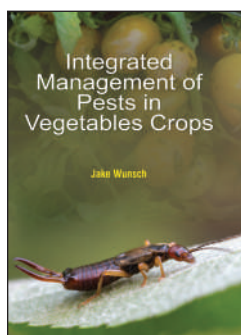


Industrial Agriculture and Management System

Rocio Bahringer

ISBN: 9781684699919 HB Price: \$ 230.00 Size: 7 × 10 Pages: 324 Year: 2020 Reprint Year: 2024

About the Book: Industrial agriculture views the farm as a factory with inputs. It is mainly concerns with the production of plant products like cereals, millets, oil seed crops, pulses, fibre crops, etc. Animals also provide meat, milk, fish, poultry, honey, animal hides and skins, animal oils and fibres. The industry has progressed well in past few years by using various techniques and chemicals fertilizers and advanced farm practices. The industrial revolution also came around to influencing agriculture, with several decennials of delay, bringing it from an almost exclusively extensive practice to intensive cultivation, aimed towards the maximum productivity per surface unit. This is how industrial agriculture was born, experiencing its boom at the end of the 50's and deeply upsetting the rural economy, agronomic science, as well as the landscape itself. The present book deals with an overall picture of industrial agriculture. The present task can only accomplished with the feedback from various sources.

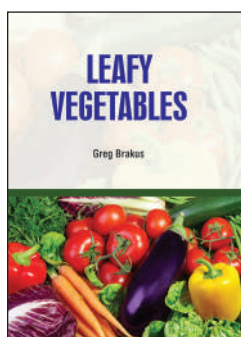


Integrated Management of Pests in Vegetables Crops

Jake Wunsch

ISBN: 9781799600329 HB Price: \$ 210.00 Size: 7 × 10 Pages: 292 Year: 2020 Reprint Year: 2024

About the Book: IPM stands for "Integrated Pest Management." The principles of IPM can be applied to managing a lawn or landscape, pests in a home or producing food in a vegetable garden. IPM uses a series of common-sense steps to manage pests and optimize plant health. The term "pest" includes insects and mites, diseases, weeds and animals. Using IPM to manage garden problems is smart because it incorporates a variety of methods that are economical and effective to keep plants healthy and achieve a bountiful harvest. An IPM plan may be slower to show results and could require more effort than spraying a chemical, but the reduced impact on the environment can be worth the investment. The more gardeners learn about biological and ecological processes, the more imaginative they will be in formulating and implementing IPM plans. The book contains properly processed, screened and relevant scientific information of societal relevance on diverse facets of applied and basic aspects of biology of pests and integrated pest management in vegetable crops.

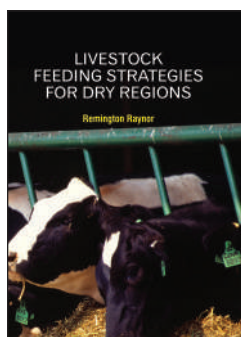


Leafy Vegetables

Greg Brakus

ISBN: 9781799600220 HB Price: \$ 185.00 Size: 7 × 10 Pages: 298 Year: 2020 Reprint Year: 2024

About the Book: Leafy green vegetables are an important part of a healthy diet. They're packed with vitamins, minerals and fiber but low in calories. Leafy green vegetables are packed with important and powerful nutrients that are critical for good health. Leafy greens, especially dark greens, are a great source of vitamins A, C and K. Vegans and those who are lactose intolerant like that the leafy green family is traditionally a good source of calcium and iron. Packed with fiber, the leafy green vegetable group is a versatile addition to a healthy diet. Leafy vegetables are ideal for weight management as they are typically low in calories. They are useful in reducing the risk of cancer and heart disease since they are low in fat, high in dietary fiber, and rich in folic acid, vitamin C, potassium and magnesium, as well as containing a host of phytochemicals, such as lutein, beta-cryptoxanthin, zeaxanthin, and beta-carotene. The authors have been prompted to write this book as a practical reference document for the students of colleges and the universities. The book includes the range of leafy vegetables, antioxidant property of leafy vegetables, importance and scope of leafy vegetables, their immense nutritional and medicinal value along with suitable sketches, photographs and supporting tables for an in-depth assessment of the updated knowledge on the nutritional and medicinal enterprises of important leafy vegetables.

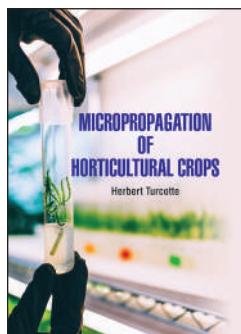


Livestock Feeding Strategies for Dry Regions

Remington Raynor

ISBN: 9781799600442 HB Price: \$ 195.00 Size: 7 × 10 Pages: 294 Year: 2020 Reprint Year: 2024

About the Book: Livestock agriculture is concerned with raising and maintaining livestock, primarily for the purposes of producing meat, milk, and eggs. Livestock agriculture also includes wool and leather production and may include animals kept for recreation (riding or racing) and draft. Livestock is a key asset for poor communities, fulfilling multiple economic, social and risk management functions. However, currently it has been challenged by climate change such as the long-term misbalance of temperature, wind and rainfall characteristics of a specific region. The condition score of livestock should be monitored throughout the drought and feeding regulated to ensure the condition score reflects reasonable animal health and welfare and suits the production requirements of the enterprise. If reasonable condition cannot be maintained, livestock should be sold or agisted. Confinement feeding is a drought feeding practice typically applied to sheep that aims to promote animal health and welfare while preserving ground cover and land condition across the majority of the property. This is achieved by confining livestock to a small area where they are fed a total ration. Successful confinement feeding relies on good site selection, an appropriate mob size and stocking density and the provision of appropriate nutrition. The book will thus serve as a repository of information and will be very useful for researchers, livestock owners, students and planners for dry regions.

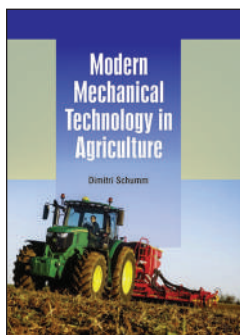


Micropropagation of Horticultural Crops

Herbert Turcotte

ISBN: 9781799600336 HB Price: \$ 205.00 Size: 7 × 10 Pages: 298 Year: 2020 Reprint Year: 2024

About the Book: Micropropagation is most widely used commercialized global application of plant biotechnology in horticulture. Micropropagation is suitable for the rapid and large-scale clonal multiplication of elite germplasm. The technique has been referred to as micropropagation because the size of the tissue in culture is very minute as compared to conventional vegetative cutting or any other plant part. The meristem explant used for micropropagation is about 0.1-0.5 mm size having only one or two leaf primordia. Micro-propagation holds a great promise in fast multiplication of fruit and nut crops, which are invariably propagated asexually to meet the ever increasing demand for adequate and timely supply of clean planting material. It also induces precocity in flowering, precision timing uniformity and often increases yield. Micropropagation is the asexual propagation of plants using the techniques of plant tissue culture (PTC). Plant tissue culture refers to growing and differentiation of cells, tissues, and organs isolated from the mother plant, on artificial solid or liquid media under aseptic and controlled conditions. The small organs or pieces of tissue plants used in PTC are called explants. The contributors of the book are eminent scientists, policy makers and managers. The book will be useful for students, researchers, policy makers and for industry.

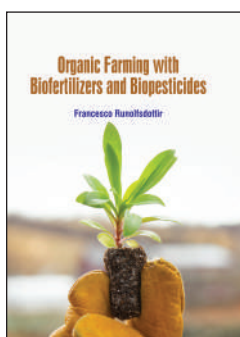


Modern Mechanical Technology in Agriculture

Dimitri Schumm

ISBN: 9781684699957 HB Price: \$ 195.00 Size: 7 × 10 Pages: 322 Year: 2020 Reprint Year: 2024

About the Book: Technology in agriculture can be used in different aspects of agriculture such as the application of herbicide, pesticide, fertilizer, and improved seed. Over the years, technology has proved to be extremely useful in the agricultural sector. Presently, farmers are able to grow crops in areas where they were thought could not grow, but this is only possible through agricultural biotechnology. For example, genetic engineering has made it possible to introduce certain traits into other genes of crops or animals. Such engineering boosts the resistance of the crops to pests and droughts. Through technology, farmers are in a position to electrify every process for efficiency and improved production. This book is intended for use by advanced secondary school agricultural education students, community college students, lower division university students, and their teachers. In addition, this book should be of benefit to farmers, agribusiness persons, and others interested in learning about mechanical technology in agriculture.

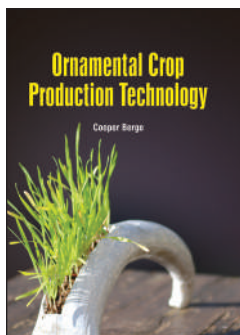


Organic Farming with Biofertilizers and Biopesticides

Francesco Runoldsdottir

ISBN: 9781684699964 HB Price: \$ 230.00 Size: 7 × 10 Pages: 362 Year: 2020 Reprint Year: 2024

About the Book: This book highlights various sources of organic and biological agents which can be used for organic farming and as well as for maintenance of soil fertility over years'. Organic manures are byproducts of processes of decomposition of organic materials available both in rural and urban areas. Organic manures have been used by the farmers from the beginning of agriculture. The production of biofertilizers is a new development and they are produced by isolation, selection and culturing on mass scale of specific microorganisms such as bacteria or fungi. Nitrogen fixing and phosphate solubilizing microorganisms are produced as biofertilizers and made available to farmers to supplement nitrogen and phosphorus needs of the crops with either organic or chemical fertilizers. We hope this book will create a balanced, objective and science based appreciation for meeting the nutrient needs of agriculture. This book has been written for agricultural planners, soil scientists, biologists, microbiologists, students, teachers, fertilizer industry, personnel research and development units, organisation engaged in biofertilizer production, training centres, all those interested in the efficient use and recycling of wastes, resource management and sustainable farming.

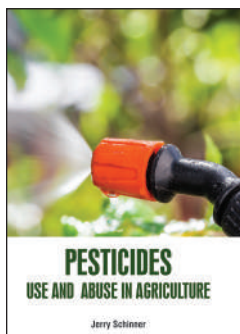


Ornamental Crop Production Technology

Cooper Berge

ISBN: 9781684699971 HB Price: \$ 195.00 Size: 7 × 10 Pages: 334 Year: 2020 Reprint Year: 2024

About the Book: Floriculture is a fast expanding dynamic industry. Production technology has advanced with the efficient use of plant resources such as water, fertilizers, pesticides; and modification of microclimate that surrounds the plants as per need during various stages of growth, development and flowering. Protected cultivation provides an excellent facility for controlled cultivation of high value crops. Hence, polyhouses are made with all modern facilities including U.V. stabilized cladding film, heating, cooling, humidification, and drip irrigation and fertigation systems. The structure and technology are, however, location and crop specific. Moreover, with the adoption of improved production technologies; a number of diseases, pests and weeds affecting ornamental crops are becoming a serious handicap in their economic production. Indiscriminate application of pesticides has led to pest resistance and resurgence as well as adverse effect on ornamental crops and also on flora and fauna in the ecosystem. In view of this an attempt has been made in this book to provide a wealth of fascinating information in 9 extensive review chapters. This book will be of immense value and serve the interests of scientists, teachers, students, policy makers, amateur and commercial flower growers.

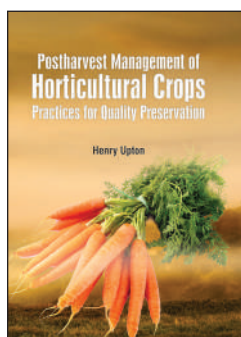


Pesticides: Use and Abuse in Agriculture

Jerry Schinner

ISBN: 9781684699988 HB Price: \$ 230.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: Chemicals are used worldwide to protect crops and structures, manage pests, and prevent the spread of disease. While beneficial to society, these pesticides can pose human health and environmental risks. Pesticides provides a comprehensive and international collection of data concerning the substances used to repel or mitigate pests ranging from insects, animals and weeds to microorganisms. The chemical, physical and bioactivity properties of each agent are recorded along with a comprehensive listing of product trade names and synonyms as well as manufacturers. This extraordinarily comprehensive view of trade name and generic synonyms makes Pesticides one of the world's most exhaustive references for agricultural chemical synonyms. This book is a vital resource for agricultural scientists, agronomists, plant scientists, plant pathologists, entomologists, environmental scientists, public health personnel, toxicologists, crop protection personnel and all those involved in the agrochemical industry and government pesticide registration and legislation.

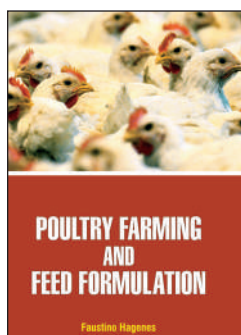


Postharvest Management of Horticultural Crops: Practices for Quality Preservation

Henry Upton

ISBN: 9781799600343 HB Price: \$ 185.00 Size: 7 × 10 Pages: 274 Year: 2020 Reprint Year: 2024

About the Book: In agriculture, postharvest handling is the stage of crop production immediately following harvest, including cooling, cleaning, sorting and packing. The present book elaborates the scientific crop management of horticultural crops starting from selection of soil and activities related to production and handling of fresh produces in the field. It aims to create capacity that would enable quality production, safe handling of produce to process, package and transport to remunerative markets so as to minimise post harvest loss and improve net availability of quality saleable produce to consumers and net return to growers. Taking advantage of these short-term market opportunities requires close links with the market. Postharvest loss is more serious as compared to production loss. Reduction of postharvest losses significantly increase availability of vegetables without bringing additional land into production and without using additional inputs. Although losses cannot be reduced completely, but can be minimised by adoption of modern cultural practices, harvesting, handling, marketing and processing techniques. This book presents several pre- and postharvest strategies that have been developed to modify these physiological activities, resulting in increased shelf life.

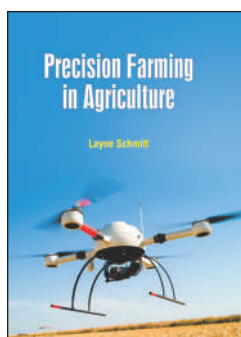


Poultry Farming and Feed Formulation

Faustino Hagenes

ISBN: 9781799600749 HB Price: \$ 230.00 Size: 7 × 10 Pages: 312 Year: 2020 Reprint Year: 2024

About the Book: Poultry farming is one of the fast growing sectors of agriculture transformed from a traditional backyard activity to agribased industry globally. The consumption pattern of poultry products is rising globally due to its advantages in terms of cost and nutritive value. Poultry meat and eggs are the cheapest animal-protein available and eaten globally across diverse cultures, traditions and religions. Traditional smallscale/ rural poultry system continue to play a crucial role in sustaining livelihoods in developing countries, supplying poultry products in rural areas, and providing important support to women farmers. It is also advantageous because you will be able to control the quality. Saving on the cost and feeding your chicken with high quality chicken feed will ensure that you maximize on profit. Feeding poultry for optimum growth and production requires that the birds consume appropriate, balanced diets. Nutrient recommendations are different for each species and the purpose of the birds (meat versus eggs), as well as the stage of growth and production. Cross feeding, such as feeding laying hens a diet that is intended for broiler chickens, is not advised. Therefore, raising mixed flocks should be done with caution. This book is an attempt to place at the disposal of poultry men at large information relative to established and dependable practices.

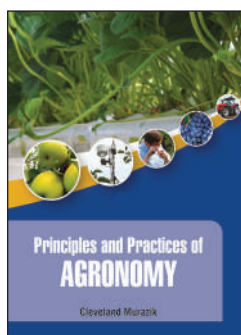


Precision Farming in Agriculture

Layne Schmitt

ISBN: 9781799600756 HB Price: \$ 230.00 Size: 7 × 10 Pages: 288 Year: 2020 Reprint Year: 2024

About the Book: Precision Agriculture covers in detail the spatial data for recordkeeping, spatial analysis in decision making and modeling prescription maps for variable rate applications. It provides an overview of precision farming concepts and the tools of precision farming system. Precision Farming is an emerging, important hi-tech approach to agricultural practices which promises to revolutionise the sector of agriculture. This new technology enables farmers to create finely detained maps of forms that describe important characteristics, such as fertilizer requirements, by a specific location of the field. Precision farming or precision agriculture is about doing the right thing, in the right place, in the right way, at the right time. Managing crop production inputs such as water, seed, fertilizer etc to increase yield, quality, profit, reduce waste and becomes eco-friendly. The intent of precision farming is to match agricultural inputs and practices as per crop and agro-climatic conditions to improve the accuracy of their applications. Precision agriculture is also known as precision ag or precision farming. Perhaps the easiest way to understand precision ag is to think of it as everything that makes the practice of farming more accurate and controlled when it comes to the growing of crops and raising livestock. A key component of this farm management approach is the use of information technology and a wide array of items such as GPS guidance, control systems, sensors, robotics, drones, autonomous vehicles, variable rate technology, GPS-based soil sampling, automated hardware, telematics, and software. This book is not just about precision farming, but it takes one important and difficult aspect of precision farming and puts it into an understandable and teachable format.

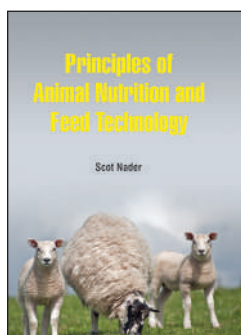


Principles and Practices of Agronomy

Cleveland Murazik

ISBN: 9781799600121 HB Price: \$ 205.00 Size: 7 × 10 Pages: 308 Year: 2020 Reprint Year: 2024

About the Book: Understanding the basic principles of agronomy is as much important as that of knowing the latest developments scenario in the field of agriculture. Agronomy is a dynamic discipline. With the advancement of knowledge and better understanding of plant and environment, agricultural practices are modified or new practices developed for high productivity. For example availability of herbicides for the control of weeds led to development of a vast knowledge about selectivity, time and method of application of herbicides. Gigantic irrigation projects are constructed to provide irrigation facilities. Soil is the medium in which crops are grown but in its natural state, it is not in an ideal condition to grow them satisfactorily. It should also have sufficient water & air which are very necessary for plant growth. Plant nutrients are elements that are essential for plant growth and reproduction that are available in the soil (e.g. nitrogen, phosphorus, and potassium), or from air or water (carbon, hydrogen, oxygen). When existing soil nutrients cannot produce good crop yields, additional nutrients must be added. Nutrients are added to the soil from commercial fertilizers or from organic sources such as manure, compost or biosolids. This book will be of immense use in imparting knowledge on the basic principles of agronomy and applied aspects of farming systems for students, teachers, scientists, extension workers and professionals engaged in agricultural development.

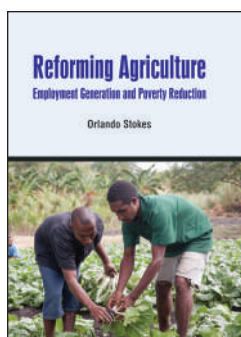


Principles of Animal Nutrition and Feed Technology

Scot Nader

ISBN: 9781799600497 HB Price: \$ 249.95 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: All living animals, and indeed the cells they are made of, have the same basic requirements for energy, protein (as amino acids), minerals, vitamins and water. There is considerable confusion when the terms 'energy' and 'protein' are used in discussing feeds and their nutritive value. For all animals, and especially ruminants, feeds cannot provide purely 'energy' or 'protein'. All sources of protein can contribute in some way to the energy metabolism of the animal. In ruminants, even sources of purified carbohydrate, containing no protein as such, provide a source of energy for rumen microbes to grow and the microbes then supply additional protein and amino acids to the host animal. Animal nutrition focuses on the dietary needs of domesticated animals, primarily those in agriculture and food production. Meeting livestock nutritional requirements is extremely important in maintaining acceptable performance of neonatal, growing, finishing and breeding animals. Compound cattle feed is a mixture of various concentrate feed ingredients in suitable proportion. Commonly used ingredients in compound cattle feed include grains, brans, protein meals/cakes, chunnies, agro- industrial by-products, minerals and vitamins. Compound cattle feed is an economical source of concentrate supplements and it could be in the form of mash, pellets, crumbles, cubes, etc. Animal feed needs to meet the requirements of the animal. For cattle it must contain a certain structure to keep the stomach healthy, and for all animals it must contain dry matter, various groups of nutrients, minerals and trace-elements and should not be mouldy or mixed with dirt and soil nor contain poisonous ingredients. The book is useful to postgraduate students of Animal Sciences, teachers and scientists of animal nutrition discipline, personnel of feed industry involved in feed manufacturing and marketing, field veterinarians, animal husbandry extension workers and progressive animal farmers and animallovers.

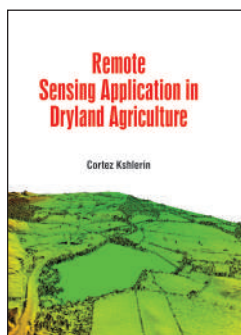


Reforming Agriculture: Employment Generation and Poverty Reduction

Orlando Stokes

ISBN: 9781799600015 HB Price: \$ 230.00 Size: 7 × 10 Pages: 274 Year: 2020 Reprint Year: 2024

About the Book: Until 2000, agriculture was the mainstay of employment around the world. Since then, the services sector has assumed this mantle and the gap between the two has widened. Although employment growth in agriculture has slowed, the number of workers in this sector reached over one billion, representing 1 in 3 of all workers. This book examines the role of agriculture in the economic transformation of developing low- and middle- income countries and explores means for accelerating agricultural growth and poverty reduction. In this book, author measures by household class the employment impact of alternative agricultural growth rates and land tenure systems, and impact. The book provides detailed analysis of each element of agricultural modernization, emphasizing the central role of government in accelerated growth in private sector dominated agriculture. The book differs from the bulk of current conventional wisdom in its placement of the non-poor small commercial farmer at the center of growth, and explains how growth translates into poverty reduction.

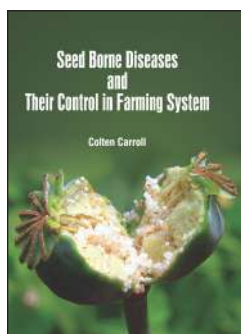


Remote Sensing Application in Dryland Agriculture

Cortez Kshlerin

ISBN: 9781799601111 HB Price: \$ 230.00 Size: 7 × 10 Pages: 296 Year: 2020 Reprint Year: 2024

About the Book: Dryland Agriculture refers to cultivation of crops entirely under natural rainfall without irrigation. It is a form of subsistence farming in the regions where deficit of the soil moisture retards the growth of water consuming crops like rice (*Oryza sativa*), sugarcane etc. Remote sensing is the acquisition of information about an object or any phenomenon without making any physical contact with the object. This book is written by leading global expert in the related field. It highlights advances made in this area, and provides guidance for the appropriate use of hyperspectral data in the study and management of dryland agricultural crops. It includes specific applications on agriculture, crop management practices, study of crop stress and diseases, study of vegetation, land use and land cover studies, crop productivity and crop water productivity mapping, and modeling. This book emphasizes the importance of remote sensing tools for studying vegetation processes and functions as well as the appropriate use of hyperspectral data for vegetation management practices. It guides readers to harness the capabilities of the most recent advances in applying remote sensing technology to the study of dryland vegetation. This book will undoubtedly be widely read, routinely consulted and provides basic concepts of the dryland farming using remote sensing. This book presents information in an easy to understand, accessible manner for students at every level.

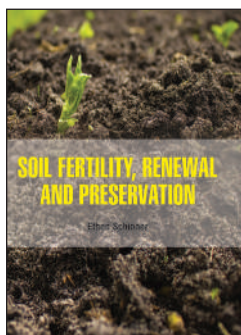


Seed Borne Diseases and Their Control in Farming System

Colten Carroll

ISBN: 9781799600039 HB Price: \$ 195.00 Size: 7 × 10 Pages: 336 Year: 2020 Reprint Year: 2024

About the Book: Seed is the basic unit in crop production technology. It has attracted the agriculturist even in early days. Seed plays a vital role in associating micro-organisms which prove hazardous for the seed or new plant created from it. Important seed borne pathogen/ micro-organism are various fungi, bacteria, viruses, nematodes etc. Seed-borne pathogens represent a major threat to crop establishment and yield. Traditionally such diseases have been controlled through the use of a range of effective chemical applications. Biological control of plant diseases can be broadly defined as the use of one organism to influence the activities of a plant pathogen. Often several mechanisms function together to make an organism effective. These products are living organisms or dried spore preparations and must be handled differently than conventional fungicides. Seed fungi are found throughout the known ranges of all tree species. Some species of fungi, such as the pitch canker fungus, *Fusarium subglutinans*, appear to be confined to certain pine species, and the amount of damage they cause varies with geographic location. The book provides comprehensive and integrated information on management of seed health written by experts in the field. It will be especially useful for students and young people involved in seed testing, seed industry as well as in teaching.

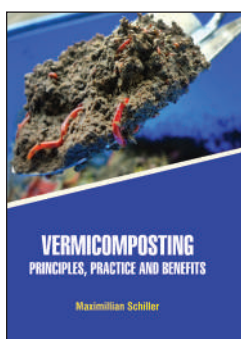


Soil Fertility, Renewal and Preservation

Ethan Schinner

ISBN: 9781799600046 HB Price: \$ 195.00 Size: 7 × 10 Pages: 342 Year: 2020 Reprint Year: 2024

About the Book: Soil fertility is a concept based on the amounts of essential nutrients available to the plants. The plant nutrients involved are classified as macronutrients such as nitrogen (N.), phosphorous (P), potassium (K), calcium (Ca), magnesium (Mg), and sulfur (S); or as micronutrients such as iron (Fe), manganese (Mn), copper (Cu), zinc (Zn), boron (B), and molybdenum (Mb). The amount of each of these nutrients is not the only factor in determining whether there are nutrient shortages. Soil pH (acidity) is also important because under certain pH conditions, nutrients form insoluble compounds which are unavailable to be taken up by plant roots. Nutrient cations occur in the soil solution and are loosely held by clay/humic micelle as exchangeable cations and are also fixed by clay minerals in the form of non-exchangeable cations. Nitrate, sulphate and phosphate anions are loosely adsorbed on the surface of hydrous oxides of iron and aluminium in acidic soils and on the surface of calcite in alkaline soils and are also fixed in the non-exchangeable form. The book is concerned primarily with the interrelationships of soils and growing plants. It has been prepared as a textbook for students taking a course in soil fertility and as a reference book for students in soil management courses.

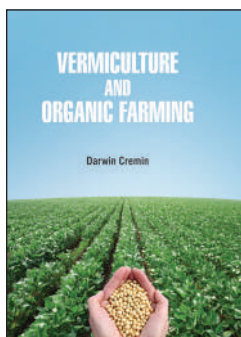


Vermicomposting: Principles, Practice and Benefits

Maximilian Schiller

ISBN: 9781799600077 HB Price: \$ 205.00 Size: 7 × 10 Pages: 274 Year: 2020 Reprint Year: 2024

About the Book: Vermicompost is the product of earthworm digestion and aerobic decomposition using the activities of micro- and macroorganisms at room temperature. Vermicomposting, or worm composting, produces a rich organic soil amendment containing a diversity of plant nutrients and beneficial microorganisms. Vermicomposting is compatible process with sound environmental principles that value conservation of resources and sustainable practices. Vermicompost is known to be the world best organic fertilizer. Vermiculture is for vermicompost. Vermiculture means artificial rearing or cultivation of worms (Earthworms) and the technology is the scientific process of using them for the betterment of human beings. The castings, or waste, from the worms are a very good source of fertilizer for gardens and horticultural enterprises and the nutrients are more readily available than from manure compost. These castings may be sold to home gardeners and commercial growers. Worm castings contain over two times the nutrient value as cow manure and are often diluted with water or mixed with potting soil. Unlike aerobic composting, however, there is little to no reduction of weed seeds or pathogens from the vermiculture process. The book guides readers on the cultivation of earthworms, vermicompost pits, and the use of earthworm excreta for effective implementation of vermicomposting.

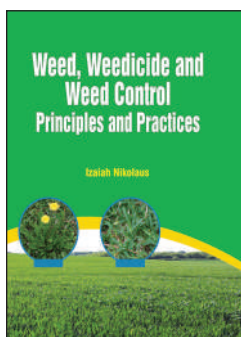


Vermiculture and Organic Farming

Darwin Cremin

ISBN: 9781799600084 HB Price: \$ 205.00 Size: 7 × 10 Pages: 296 Year: 2020 Reprint Year: 2024

About the Book: Vermicomposting is a process in which earthworms are used to convert organic materials into humuslike material known as vermicompost. A number of researchers throughout the world have found that the nutrient profile in vermicompost is generally higher than traditional compost. In fact, vermicompost can enhance soil fertility physically, chemically and biologically. Physically, vermicompost-treated soil has better aeration, porosity, bulk density and water retention. Chemical properties such as pH, electrical conductivity and organic matter content are also improved for better crop yield. Nevertheless, enhanced plant growth could not be satisfactorily explained by improvements in the nutrient content of the soil, which means that other plant growth-influencing materials are available in vermicomposts. Organic farming is a system, which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc) and to the maximum extent feasible relies upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection. This book is need of modern agriculture and useful guide to naturalist, students, teachers, farmers, researchers and industrialist.



Weed Weedicide and Weed Control: Principles and Practice

Izaiah Nikolaus

ISBN: 9781799600091 HB Price: \$ 195.00 Size: 7 × 10 Pages: 326 Year: 2020 Reprint Year: 2024

About the Book: Weed seeds are easily blown into the greenhouse through vents and other openings. Weeds and their seeds can be brought into the greenhouse on infected plant material, tools, and equipment. Seeds can be moved in soil, by the wind, irrigation water, animals and people. Creeping wood sorrel, (Oxalis corniculata), hairy bitter cress (Cardamine hirsuta), prostrate spurge (Euphorbia humistrata), common chickweed (Stellaria media) and other weeds are persistent problems in greenhouses. These annual weeds reproduce primarily by seed, with several generations occurring per year. Prevention and sanitation are the grower's first line of defense. Weedicide are known as the weed killers or pesticides that are used to kill unwanted plants. The implements used for mechanical weed control shear and tear the surface of the soil resulting in the uprooting of plants. But many of the weeds have deep and extensive roots that cannot be uprooted and majority of them can regenerate. The most common examples are grasses like kans grass, thatch grass and quack grass. To kill such weeds, chemical weedkillers are necessary. This book will be helpful to research workers, college and University teachers, Vocational teachers, extension specialists, herbicide sale representatives and progressive farmers. Weed control practices suggested are based on research reports of several workers in this field and his own experience.



Wheat Crop Cultivation Management

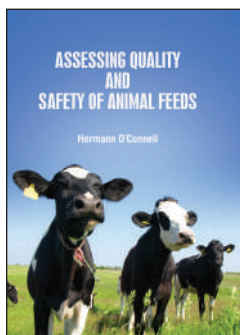
Sofia Hermiston

ISBN: 9781799600107 HB Price: \$ 190.00 Size: 7 × 10 Pages: 310 Year: 2020 Reprint Year: 2024

About the Book: Wheat is a grass widely cultivated for its seed, a cereal grain which is a worldwide staple food. The many species of wheat together make up the genus *Triticum*; the most widely grown is common wheat (*T. aestivum*). Wheat is the most widely cultivated cereal in the world and a staple food for around 3 billion people. It has been estimated that demand for wheat could increase by up to 560% by 2050. There is an urgent need to increase yields in the face of such challenges as climate change, threats from pests and diseases and the need to make cultivation more resource-efficient and sustainable. The cultivation of wheat (*Triticum* spp.) reaches far back into history. Its success depends partly on its adaptability and high yield potential but also on the gluten protein fraction which confers the viscoelastic properties that allow dough to be processed into bread, pasta, noodles, and other food products. Wheat also contributes essential amino acids, minerals, and vitamins, and beneficial phytochemicals and dietary fibre components to the human diet, and these are particularly enriched in whole-grain products. This book will be useful to students of Agronomy of all the agricultural colleges/universities. This book will also be useful for students, research institutes run by ICAR, students of the agricultural training centres for references.



Animal Science

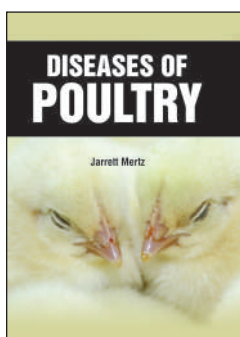


Assessing Quality and Safety of Animal Feeds

Hermann O'Connell

ISBN: 9781799600367 HB Price: \$ 195.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: Animal feed is the food given to animals which are domestic often refers to fodder in course of care and management of farm animals by humans for profit. Supply of quality feed ensures the health of animals. Various feeds include poultry feed, sheep husbandry, cat food, pet food, pig farming, cattle feeding, dog food, equine nutrition and bird food. Recent advances in ration balancing include manipulation of feed to increase the quantity and quality of protein and energy delivered to the small intestine. The limited supply of protein post-rationally under most feeding systems in developing countries is an important limiting factor which prevents an increase in animal productivity. Feeds and forages are variable in composition. Feed analysis provides information for farmers to optimize nutrient utilization in animal feeds; for feed compounders to prepare feed mixtures suitable for different animal production systems; for researchers to relate animal performance to feed characteristics; and for plant breeders to optimize the nutritive value of new varieties. Also of concern are the undesirable contaminants of animal feeds which may have a direct bearing on the safety of foods of animal origin. This book provides the most recent information on the impact of animal feeds on food quality, food safety and the environment and thus improves the basis for managing such risks, which are increasingly at the centre of public and individual consumer attention.

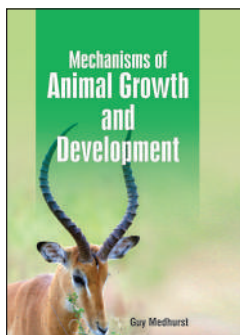


Diseases of Poultry

Jarrett Mertz

ISBN: 9781799601326 HB Price: \$ 230.00 Size: 7 × 10 Pages: 318 Year: 2020 Reprint Year: 2024

About the Book: Poultry are domesticated birds kept by humans for their eggs, their meat or their feathers. These birds are most typically members of the superorder Galloanserae, especially the order Galliformes. Poultry diseases are diseases that afflict poultry. The eradication of poultry disease is very important to the poultry industry. This is the most comprehensive reference for all aspects of poultry health and diseases, including pathogenesis, diagnostics, epidemiology, history, etiology, pathobiology and control methods as well as the economic and public health significance, for common and uncommon diseases. It is the most complete and trusted source for current knowledge on the diagnosis and management of diseases in poultry. This edition is the international definitive reference having newer diagnostic methods and offers information on disease control in organic and antibiotic-free production systems in a systematic way. This book also includes high-quality photographs and a greater emphasis throughout on the differences in disease incidence and treatments in the different areas around the globe. This book is an essential for poultry veterinarians, veterinary diagnosticians, poultry scientists, students specializing in poultry health, and government officials who deal with poultry health in regulatory climate.

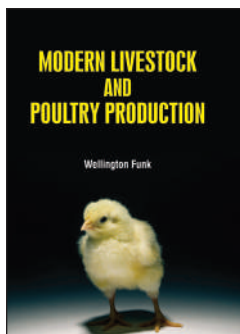


Mechanisms of Animal Growth and Development

Guy Medhurst

ISBN: 9781799600459 HB Price: \$ 195.00 Size: 7 × 10 Pages: 314 Year: 2020 Reprint Year: 2024

About the Book: Animal development, the processes that lead eventually to the formation of a new animal starting from cells derived from one or more parent individuals. Development thus occurs following the process by which a new generation of organisms is produced by the parent generation. Growth is the process by which an animal becomes larger over time, and may be measured in different ways, such as physical height or length, but the most common measure is the body weight change. Growth can also be described in terms of the rate of deposition of the major specific chemical constituents of the tissues. Cells consist of proteins, lipids, nucleic acids, carbohydrates, water and mineral components, all of which are in a dynamic state of turnover. Evolution has diversified upon the molecular and anatomical fundamentals that we describe in this chapter to produce the wonderful variety of present-day species. But the underlying conservation of genes and mechanisms means that studying the development of one animal very often leads to general insights into the development of many other types of animals. The text in the book uses a new and simplifying approach to this long-standing controversy. By a computerized analysis of antibody amino acid sequences (particularly the myeloma proteins), the authors trace their evolution and match their results against the expectations of the various theories of diversity.

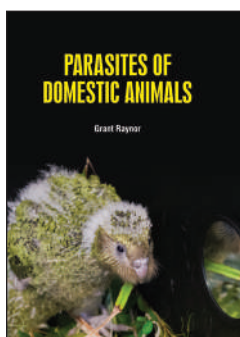


Modern Livestock and Poultry Production

Wellington Funk

ISBN: 9781799600473 HB Price: \$ 195.00 Size: 7 × 10 Pages: 310 Year: 2020 Reprint Year: 2024

About the Book: Modern Livestock and Poultry Production gives the reader a very true sense of the world of the livestock industry. It sets the scene for work in the field with an overview of the industry. Livestock convert feed grains and roughages into food for human consumption. There is some controversy over the use of feed grains as livestock feed. In the face of world food shortages, it has been suggested that this is not the most efficient use of limited resources. Ruminants are important because they have the ability to convert large quantities of materials that cannot be used directly for human food into human food. Meat chickens, commonly called broilers, are floor-raised on litter such as wood shavings or rice hulls, indoors in climate-controlled housing. Poultry producers routinely use nationally approved medications, such as antibiotics, in feed or drinking water, to treat disease or to prevent disease outbreaks arising from overcrowded or unsanitary conditions. This book has been aimed at those involved in animal husbandry as a guide into the production techniques involved in livestock and poultry. The traditional curriculum for the study of animal husbandry deals with the technology of cattle, horse, pig, swine, sheep, goat and poultry production, and the book undertakes a detailed look into the breeding, rearing and feeding techniques that have a telling effect on the growth or shrinkage of livestock numbers not ignoring the effect of natural conditions.

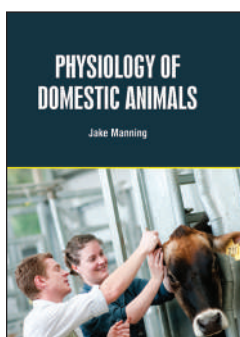


Parasites of Domestic Animals

Grant Raynor

ISBN: 9781799601401 HB Price: \$ 249.95 Size: 7 × 10 Pages: 294 Year: 2020 Reprint Year: 2024

About the Book: A parasite is an organism that lives on or in a host organism and gets its food from or at the expense of its host. Many species of flies of the two winged type, Order Diptera, such as mosquitoes, horse-flies, blow-flies and warble-flies, cause direct parasitic disease to domestic animals, and transmit organisms that cause diseases. These infestations and infections cause distress to companion animals, and in livestock industry the financial costs of these diseases are high. These problems occur wherever domestic animals are reared. This heavily illustrated text teaches parasites of domestic animals from a biological perspective. It combines classical descriptive biology of parasites with modern cell and molecular biology approaches, and also addresses parasite evolution and ecology. This textbook focuses on the most important parasites affecting dogs, cats, ruminants, horses, pigs and other domestic animals. For each parasite, the book offers a concise summary including its distribution, epidemiology, lifecycle, morphology, clinical manifestations, diagnosis, prophylaxis and therapeutic measures. Numerous informative tables and schemes present the most important aspects of the parasites, their induced diseases and the latest information on suitable prevention and control measures. The book is well suited as both textbook and a reference guide for veterinarians, students of the veterinary and life sciences, veterinarian nurses, laboratory staff, and pet and livestock owners.

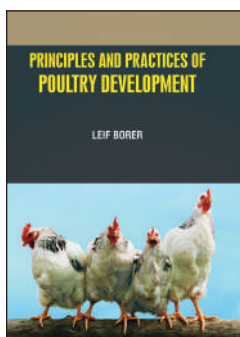


Physiology of Domestic Animals

Jake Manning

ISBN: 9781799601456 HB Price: \$ 249.95 Size: 7 × 10 Pages: 346 Year: 2020 Reprint Year: 2024

About the Book: Physiology of domestic animals is the study of normal function within domestic animals. It is a sub-section of biology, covering a range of topics that include organs, anatomy, cells, biological compounds, and how they all interact to make life possible. This textbook is designed for students of veterinary, animal and agricultural sciences but it is also well suited for university courses in general and mammalian physiology. The book is divided into different chapters describing physiological systems such as digestion, reproduction, and circulation. The textbook emphasizes functional aspects of physiology. It is designed to help students develop the problem-solving skills that they will need in their future careers. This edition comprehensively explains recent progress in domestic animal physiology, in addition to introducing important new tools that enhance the students' learning outcome. It provides a thorough, systems-based physiology of a wide range of domestic animal species. It is organized in a logical user-friendly format. It is written by a leading animal science researcher and instructor with decades of experience in the field. The broad coverage and abundant illustrations will provide students with a much-needed basic understanding of anatomy and physiology.

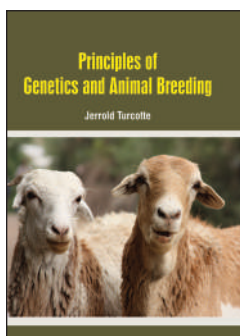


Principles and Practices of Poultry Development

Leif Borer

ISBN: 9781799600480 HB Price: \$ 195.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Poultry development in the country has shown steady progress over the years, primarily due to research and development schemes of Government as well as effective marketing & management by organized private sector. The poultry sector has emerged from entirely unorganized farming practice to commercial production system with state-of-the-art technological interventions. Poultry sector, besides providing direct or indirect employment to people, is also a potent tool for subsidiary income generation for many landless and marginal farmers. The utilization of new and existing local feed resources through different feeding techniques can assist in mitigating the potential impacts of climate change. For scavenging systems assessment of the scavengeable feed resource and its efficient use is crucial. Family poultry farmers using small extensive scavenging and extensive scavenging systems should be able to use on-farm mixtures as supplements to scavenging. Supplementation with locally available feedstuffs or commercial feed as a supplement to scavenging can be recommended for the semi-intensive system if the market prices of the birds or eggs ensure profitability. This book serves as a ready reference for students of poultry science, LPM, economics, extension and marketing disciplines.

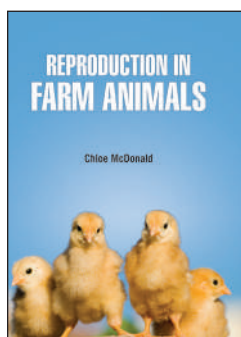


Principles of Genetics and Animal Breeding

Jerrold Turcotte

ISBN: 9781799600503 HB Price: \$ 185.00 Size: 7 × 10 Pages: 296 Year: 2020 Reprint Year: 2024

About the Book: Although animal breeding was practiced long before the science of genetics and the relevant disciplines of population and quantitative genetics were known, breeding programs have mainly relied on simply selecting and mating the best individuals on their own or relatives' performance. Animal breeding, genetics, and genomics is the branch of science concerned with maximizing desirable genetic traits, such as producing animals that have leaner meat. Animal geneticists have identified elements within genes that can enhance animal growth, health, and ability to utilize nutrients. In animal breeding, a population is a group of interbreeding individuals-i.e., a breed or strain within a breed that is different in some aspects from other breeds or strains. Typically, certain animals within a breed are designated as purebred. The subject matter has been dealt with in a logical sequence so that the reader is conveyed from simple to more complex interpretation with relative ease. It is felt that the reader which are likely to comprise mostly of graduate and post graduate student of animal breeding and researcher will be able to get a deeper insight and better perceptions into the realm of the dynamic science of animal breeding. This book attempts to describe applied breeding methods for different domestic animal species as currently implemented.

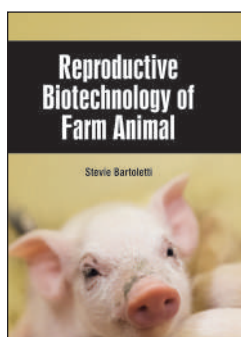


Reproduction in Farm Animals

Chloe McDonald

ISBN: 9781799601463 HB Price: \$ 249.95 Size: 7 × 10 Pages: 332 Year: 2020 Reprint Year: 2024

About the Book: Some animals produce offspring through asexual reproduction while other animals produce offspring through sexual reproduction. Both methods have advantages and disadvantages. Sexual reproduction is the combination of reproductive cells from two individuals to form genetically unique offspring. This is a fresh and up-to-date edition and is perfect for anyone studying in the fields of animal science, dairy science, or pre-veterinary medicine. It provides a complete overview of animal reproductive processes. It is designed to help the reader develop both the terminology needed to discuss reproductive problems associated with physiology of reproduction as well as understand the physiological processes controlling reproduction. It also emphasizes the application of basic concepts to the management of reproduction, biological and biomedical aspects of animal reproduction in farm animals. The text provides current information about animal reproductive anatomy and physiology. This expansive text covers the full range of topics in animal reproduction, from the biology of male and female systems to conception, pregnancy, labor and birth. It also covers issues in fertility and its control, population growth and planning and abortion. This is the ideal book for courses on animal reproductive biology.

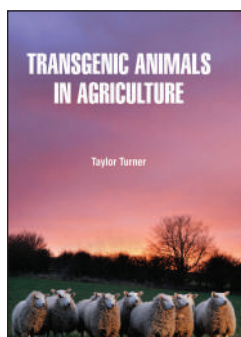


Reproductive Biotechnology of Farm Animal

Stevie Bartoletti

ISBN: 9781799600510 HB Price: \$ 185.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: Farm animal selection and reproduction are on the threshold of the application of new biotechnologies. Modern biotechnologies will allow advances to be made. Research into physiology and embryology has provided a basis for the development of technologies that increase productivity of farm animals through enhanced control of reproductive function. The livestock provides many opportunities to utilize these disciplines and evolving competencies. Artificial insemination, embryo transfer, in vitro fertilization, cloning, transgenics and genomics all are components of the tool box for present and future applications. However, with the application of best animal husbandry practices including optimum feeding, breeding and management the increase in the rate of reproduction that can be achieved, is bound by the physiological limits. To cross this limit, and to produce more and more, to keep pace with the ever-growing human population, the application of bio-technological tools in animal reproduction is the only solution. This attracted researchers and research grants to support animal reproduction research all over the world. This text remains key reading for students in animal science, agriculture, veterinary medicine and biology, and veterinary practitioners and farmers who wish to keep updated on developments in techniques that may be useful in their daily practice.

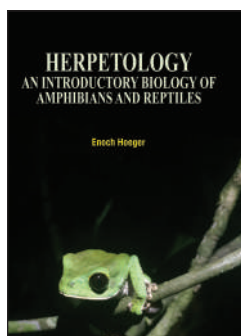


Transgenic Animals in Agriculture

Taylor Turner

ISBN: 9781799600060 HB Price: \$ 195.00 Size: 7 × 10 Pages: 298 Year: 2020 Reprint Year: 2024

About the Book: Transgenic animals are routinely used in the laboratory as models in biomedical research. Over 95 per cent of those used are genetically modified rodents, predominantly mice. They are important tools for researching human disease, being used to understand gene function in the context of disease susceptibility, progression and to determine responses to a therapeutic intervention. Agriculture was the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that nurtured the development of civilization. The study of agriculture is known as agricultural science. The history of agriculture dates back thousands of years, and its development has been driven and defined by greatly different climates, cultures, and technologies. Industrial agriculture based on large-scale monoculture farming has become the dominant agricultural methodology. The book is essential reading for research workers in animal genetics, breeding and biotechnology.

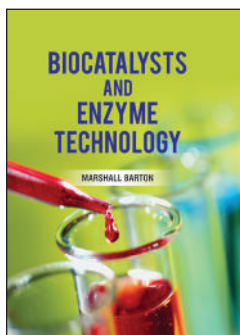


Herpetology: An Introductory Biology of Amphibians and Reptiles

Enoch Hoeger

ISBN: 9871799601364 HB Price: \$ 225.00 Size: 7 × 10 Pages: 333 Year: 2020 Reprint Year: 2024

About the Book: Herpetology has dependably been a standout amongst the most energizing controls of zoology. Through dexterous blend, the writer condenses the assorted variety in the science of living creatures of land and water and reptiles and portrays the broadness of ebb and flow herpetological look into. Themes secured incorporate the advancement, characterization, improvement, propagation, populace, and ecological issues encompassing the investigation of creatures of land and water and reptiles. In addition to the fact that it serves as a strong establishment for present day herpetology courses, yet it is likewise important to courses in biology, conduct, development, systematics, and morphology. Models taken from creatures of land and water and reptiles all through the world make this book a valuable herpetology reading material in a few nations. Creatures of land and water and reptiles have accepted a focal job in research due to the decent variety of environmental, physiological, morphological, conduct, and transformative examples they display. Incorporates expanded spotlight on preservation science in herpetology while holding strong substance on organismal science of reptiles and creatures of land and water.

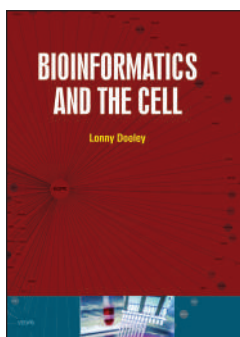


Biocatalysts and Enzyme Technology

Marshall Barton

ISBN: 9781799600671 HB Price: \$ 225.00 Size: 7 × 10 Pages: 316 Year: 2020 Reprint Year: 2024

About the Book: Enzymes are proteins and are nature's own biocatalysts. Enzymes are produced by living systems to accelerate and sustain the myriad of chemical reactions necessary to sustain life. Biocatalysis underpins some of the oldest chemical transformations known to humans, for brewing predates recorded history. The oldest records of brewing are about 6000 years old and refer to the Sumerians. The employment of enzymes and whole cells have been important for many industries for centuries. The most obvious uses have been in the food and drink businesses where the production of wine, beer, cheese etc. is dependent on the effects of the microorganisms. Enzymes or biocatalyst are the natural proteins produced in tiny quantities by all living organisms and functioning as highly selective biochemical catalysts in converting one molecule into another. Enzymes are biological molecules with a definite structural organization that influence their catalytic function. Currently enzymes are being employed in industrial biotechnology for numerous purposes for the production of novel and sustainable products at a speedy rate. Enzyme technology encompasses modification of enzyme structure or its catalytic function to yield novel metabolites or to take part in new reaction pathways. The study and application of enzymes have assumed increasing importance both in medicine and in industry and a discussion of these aspects is therefore given prime importance.

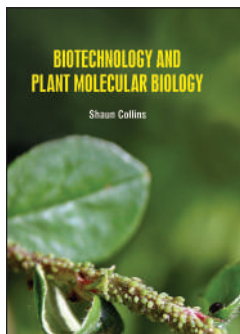


Bioinformatics and The Cell

Lonny Dooley

ISBN: 9781799601272 HB Price: \$ 230.00 Size: 7 × 10 Pages: 324 Year: 2020 Reprint Year: 2024

About the Book: Bioinformatics is a field of study that uses computation to extract knowledge from biological data. It includes the collection, storage, retrieval, manipulation and modelling of data for analysis, visualization or prediction through the development of algorithms and software. This book is a remarkable book because it integrates the more technical and mathematical aspects of bioinformatics with concrete examples of their application to current research problems in molecular and cellular biology. It is the integration of genomics, proteomics and transcriptomics into a single volume which makes this book required reading for students entering the new and emerging field of Systems Biology. It is the book with comprehensive numerical illustration of mathematical techniques and computational algorithms used in bioinformatics to convert the rapidly increasing molecular data into organized biological knowledge, with a focus on interactions among DNA, RNA and proteins in the cell. It is a welcome addition to the burgeoning field of bioinformatics text books. This book is highly informative and student-oriented book and provides expanded information on the related field. This book grasps and keeps vital information, succinct text, and dynamic illustrations that facilitate learning in a highly visual approach. Professionals, researchers and students will find this book valuable.

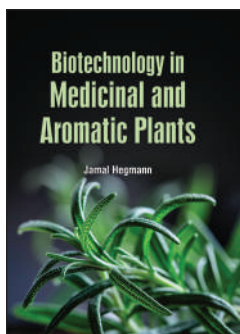


Biotechnology and Plant Molecular Biology

Shaun Collins

ISBN: 9781799601012 HB Price: \$ 230.00 Size: 7 × 10 Pages: 334 Year: 2020 Reprint Year: 2024

About the Book: Biotechnology is a recently developed domain of research involving new techniques that have arisen out of interdisciplinary interaction and comprises genetic engineering, immobilization of biocatalytic systems, cultivation of animal, plant and microbial cells, development of used cell techniques and bioengineering processes and systems. Plant science is one of the fundamental subjects to begin with. Biotechnology has given it a force to get modified into an applied field known as plant biotechnology. Plant tissue culture is widely used for direct commercial applications as well as value in basic research into cell biology, genetics and biochemistry. Plant Biotechnology has made tremendous progress in recent years. The present publication aims to provide enough information and examples to give the reader a sound knowledge of plant biotechnology in all its guises. Molecular Biology is the field of biology that studies the composition, structure and interactions of cellular molecules such as nucleic acids and proteins - that carry out the biological processes essential for the cell's functions and maintenance. The use of biology to develop technologies and products for the welfare of human beings is known as Biotechnology. Plant cells are similar to animal cells in that they are both eukaryotic cells and have similar organelles. Plant cells are generally larger than animal cells. While animal cells come in various sizes and tend to have irregular shapes, plant cells are more similar in size and are typically rectangular or cube shaped. A plant cell also contains structures not found in an animal cell. Some of these include a cell wall, a large vacuole, and plastids. Plastids, such as chloroplasts, assist in storing and harvesting needed substances for the plant. Animal cells also contain structures such as centrioles, lysosomes, and cilia and flagella that are not typically found in plant cells. This book will serve as an excellent reference material and practical guide for scientists teachers students planners and administrators interested in Plant Physiology Botany and Agriculture Science.

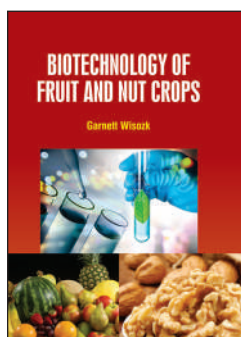


Biotechnology in Medicinal and Aromatic Plants

Jamal Hegmann

ISBN: 9781799600152 HB Price: \$ 185.00 Size: 7 × 10 Pages: 338 Year: 2020 Reprint Year: 2024

About the Book: Medicinal plants are the most important source of life saving drugs for the majority of the world's population. The biotechnological tools are important to select, multiply and conserve the critical genotypes of medicinal plants. In-vitro regeneration holds tremendous potential for the production of high-quality plant-based medicine. Medicinal plants are the most important source of life saving drugs for the majority of the world's population. Biotechnology offers several choices through which secondary metabolism in medicinal plants can be altered in innovative ways, to overproduce phytochemicals of interest, to reduce the content of toxic compounds or even to produce novel chemicals. Medicinal and aromatic plants constitute a major segment of the flora, which provides raw materials for use in the pharmaceuticals, cosmetics, and drug industries. The indigenous systems of medicines, developed in India for centuries, make use of many medicinal herbs. These systems include Ayurveda, Siddha, Unani, and many other indigenous practices. More than 9,000 native plants have established and recorded curative properties and about 1500 species are known for their aroma and flavour. This book will cater to the immediate needs of the students, researchers, faculty members and pharmaceutical industries.

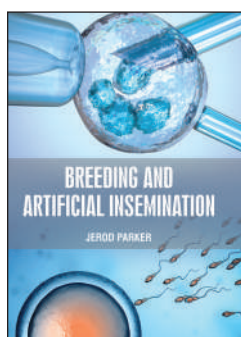


Biotechnology of Fruit and Nut Crops

Garnett Wisozk

ISBN: 9781799601289 HB Price: \$ 230.00 Size: 7 × 10 Pages: 292 Year: 2020 Reprint Year: 2024

About the Book: Biotechnology is a broad discipline in which biological processes, organisms, cells or cellular components are exploited to develop new technologies. New tools and products developed by biotechnologists are useful in research, agriculture, industry and the clinic. Genetic modification is one of the most important and controversial issues facing the food industry. This book is a comprehensive reference work on the current status of biotechnology of the major temperate, subtropical and tropical fruit and nut crop species of the world. It includes coverage of more fruit as well as nut crop species. This book analyses its major impact on fruit and vegetable cultivation and processing. It also discusses the modification of such agronomic traits as fruit quality and resistance to various kinds of environmental stress, as well as the use of molecular markers in plant breeding, and how biotechnology can improve plant defence mechanisms. It is filled with engaging figures that strongly support the explanations in the text. It is essential reading for those involved both in cultivation and the processing of fruit and vegetables. This excellent textbook is ideal for undergraduate and graduate courses in fruit biotechnology, as well as, courses related to this field.

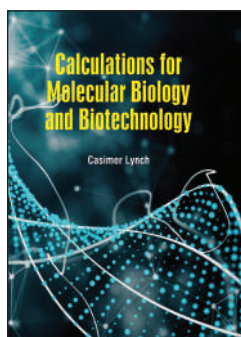


Breeding and Artificial Insemination

Jerod Parker

ISBN: 9781799601296 HB Price: \$ 230.00 Size: 7 × 10 Pages: 290 Year: 2020 Reprint Year: 2024

About the Book: Artificial insemination (AI) is the process of collecting sperm cells from a male animal and manually depositing them into the reproductive tract of a female. It is commonly used instead of natural mating in many species of animals because of the many benefits it can reap. These benefits include increased safety of the animals and producer, increased production efficiency and better genetics. This book is written for practicing veterinarians, veterinary students and animal breeding managers. It provides practical information on the reproductive management of both thoroughbred and warmblood breeding operations. The reader will be able to find detailed description of practical procedures or techniques in areas such as male management, female management, artificial insemination with fresh, cooled or frozen semen, embryo transfer, semen evaluation, etc. These procedures can be implemented on most breeding farms that use both natural over or artificial insemination. This work is therefore intended mainly for the use of stock owners, breeders, agricultural students, insemination technicians and sterility workers in the hope that it will assist in improving the notoriously low breeding efficiency of our herds and flocks, and so raise the level of animal production as regards both quantity and quality.

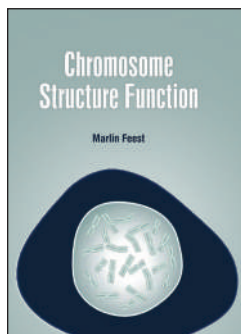


Calculations for Molecular Biology and Biotechnology

Casimer Lynch

ISBN: 9781799600169 HB Price: \$ 215.00 Size: 7 × 10 Pages: 314 Year: 2020 Reprint Year: 2024

About the Book: Molecular Biology is the branch of biology that deals with the macromolecules essential to life. Biotechnology involves the manipulation of living organisms to create useful products. Molecular biotechnology is exciting! The tools of molecular biotechnology can be applied to develop and improve drugs, vaccines, therapies, and diagnostic tests that will improve human and animal health. Molecular biotechnology has applications in plant and animal agriculture, aquaculture, chemical and textile manufacturing, forestry, and food processing. Applications of recombinant DNA methods, collectively called biotechnology, are yielding new approaches to disease treatment, drug development, forensics, and even the study of evolution. Bacteriophages have evolved to exploit host bacteria to create progeny phages that ultimately destroy the bacterial target. Once a phage infects a host bacterial cell, it replicates itself, producing many new phages and causing the bacterium to burst, thereby releasing the remaining phages to infect and kill neighboring bacteria. The book begins by discussing the use of scientific notation and metric prefixes, which require the use of exponents and an understanding of significant digits.

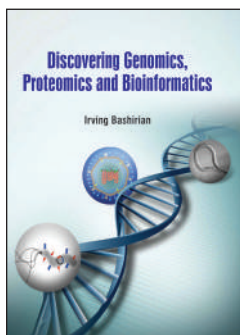


Chromosome Structure Function

Marlin Feast

ISBN: 9781799601302 HB Price: \$ 230.00 Size: 7 × 10 Pages: 318 Year: 2020 Reprint Year: 2024

About the Book: Chromosomes are thread-like structures in which DNA is tightly packaged within the nucleus. DNA is coiled around proteins called histones, which provide the structural support. Chromosomes help ensure that DNA is replicated and distributed appropriately during cell division. Most eukaryotic chromosomes include packaging proteins which, aided by chaperone proteins, bind to and condense the DNA molecule to prevent it from becoming an unmanageable tangle. Our understanding of the function and structure of chromosomes and their interrelationship has grown in recent years. Integrating classical knowledge of chromosome organisation with recent molecular and functional findings, this book presents an up-to-date view of chromosome organisation and function for advanced undergraduate and graduate students studying genetics. This text aims to provide a clear and straightforward explanation of the complex processes of the chromosomes. It will be an invaluable resource for undergraduate and postgraduate students in fields such as plant and animal sciences, genetics, and molecular biology. In fact, any student, teacher or researcher interested in chromosome biology will find this special issue indispensable.



Discovering Genomics, Proteomics and Bioinformatics

Irving Bashirian

ISBN: 9781799600176 HB Price: \$ 195.00 Size: 7 × 10 Pages: 294 Year: 2020 Reprint Year: 2024

About the Book: Genomics, in contrast, is the study of the entirety of an organism's genes – called the genome. Using high-performance computing and math techniques known as bioinformatics, genomics researchers analyze enormous amounts of DNA-sequence data to find variations that affect health, disease or drug response. In humans that means searching through about 3 billion units of DNA across 23,000 genes. The focus of proteomics is a biological group called the proteome. The proteome is dynamic, defined as the set of proteins expressed in a specific cell, given a particular set of conditions. They serve a variety of functions within the cell, and there are thousands of distinct proteins and peptides in almost every organism. Bioinformatics is largely (not exclusively) a computer-based discipline. Computers are in fact very essential to handle large volumes of biological data, their storage and retrieval. We have to accept the fact that there is no computer on earth (however advanced) which can store information, and perform the functions like a living cell. Thus a highly complex information technology lies right within the cells of an organism. This primarily includes the organism's genes and their dictates for the organism's biological processes and behaviour. This book will focus on functional genomics and how to search and use the information using bioinformatics.

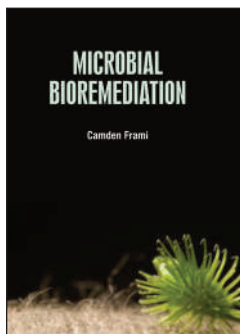


Fundamentals of Biostatistics

Ezequiel Johns

ISBN: 9781799601357 HB Price: \$ 225.00 Size: 7 × 10 Pages: 278 Year: 2020 Reprint Year: 2024

About the Book: Biostatistics are the development and application of statistical methods to a wide range of topics in biology. It encompasses the design of biological experiments, the collection and analysis of data from those experiments and the interpretation of the results. Using the tools of statistics, biostatisticians help answer pressing research questions in medicine, biology and public health, such as whether a new drug works, what causes cancer and other diseases, and how long a person with a certain illness is likely to survive. The field of Biostatistics is a highly respected, well-paid field of practice. Individuals with the right skill set can pursue an exciting and important career. For individuals with a strong interest in mathematics, science, statistics and health, a position as a Biostatistician is an excellent way to combine your strengths. Biostatistics (or biometry) deals with the statistical processes and methods applied to the analysis of biological phenomena. The science of biostatistics incorporates the design of biological experiments and interpreting the collection, summarization, and analysis of data from those experiments. This book may be used as a textbook by undergraduate and postgraduate students of biostatistics in biological, agricultural and health sciences. It will help researchers in these and other aforesaid disciplines.

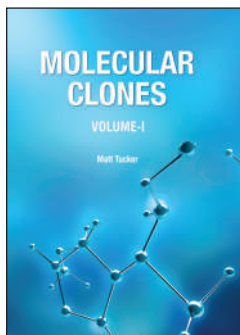


Microbial Bioremediation

Camden Frami

ISBN: 9781799601388 HB Price: \$ 225.00 Size: 7 × 10 Pages: 312 Year: 2020 Reprint Year: 2024

About the Book: The method of bioremediation uses living beings - typically microscopic organisms and parasites - to expel toxins from soil and water with negligible unsettling influence to these conditions. Microbial procedures are ecologically good and can be coordinated with non-natural procedures to detoxify, debase and immobilize natural contaminants. Expanded modern and horticultural movement this century has prompted immense amounts of the world's dirt and groundwater assets getting to be sullied with perilous synthetic concoctions. This methodology, which is possibly more financially savvy than conventional systems, for example, cremation of soils and carbon filtration of water, requires a comprehension of how living beings change synthetic substances, how they make due in contaminated situations and how they ought to be utilized in the field. This book offers the likelihood of debasing, evacuating, adjusting, immobilizing, or generally detoxifying different synthetics from the earth through the activity of microscopic organisms, growths and plants. In situ remediation frameworks, air sparging and bioventing, the utilization of electron acceptors other than oxygen, regular bioremediation, and the presentation of life forms into the subsurface are among the particular themes canvassed in this priceless handbook.

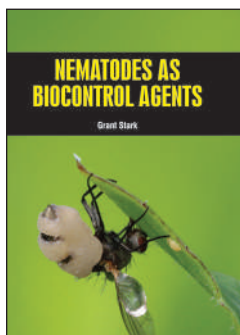


Molecular Clones

Matt Tucker

ISBN: 9781799601555 HB Price: \$ 225.00 Size: 7 × 10 Pages: 262 Year: 2020 Reprint Year: 2024

About the Book: Molecular cloning is a set of experimental methods in molecular biology that are used to assemble recombinant DNA molecules and to direct their replication within host organisms. The use of the word cloning refers to the fact that the method involves the replication of one molecule to produce a population of cells with identical DNA molecules. Molecular cloning generally uses DNA sequences from two different organisms: the species that is the source of the DNA to be cloned, and the species that will serve as the living host for replication of the recombinant DNA. Molecular cloning methods are central to many contemporary areas of modern biology and medicine. Molecular cloning refers to the isolation of a DNA sequence from any species (often a gene), and its insertion into a vector for propagation, without alteration of the original DNA sequence. Once isolated, molecular clones can be used to generate many copies of the DNA for analysis of the gene sequence, and/or to express the resulting protein for the study or utilization of the protein's function. The clones can also be manipulated and mutated in vitro to alter the expression and function of the protein. Molecular cloning is a set of methods, which are used to insert recombinant DNA into a vector - a carrier of DNA molecules that will replicate recombinant DNA fragments in host organisms. The DNA fragment, which may be a gene, can be isolated from a prokaryotic or eukaryotic specimen. DNA cloning is the process of making multiple, identical copies of a particular piece of DNA. In a typical DNA cloning procedure, the gene or other DNA fragment of interest (perhaps a gene for a medically important human protein) is first inserted into a circular piece of DNA called a plasmid. The insertion is done using enzymes that "cut and paste" DNA, and it produces a molecule of recombinant DNA, or DNA assembled out of fragments from multiple sources. This book presents the principles of gene manipulation and its associated techniques in sufficient details and also covers biological replication of DNA, restriction and endonuclease and other related enzymes.

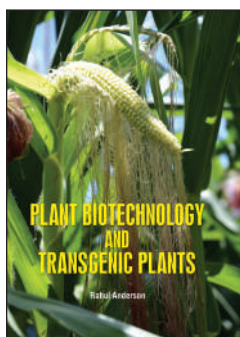


Nematodes As Biocontrol Agents

Grant Stark

ISBN: 9781799601395 HB Price: \$ 225.00 Size: 7 × 10 Pages: 350 Year: 2020 Reprint Year: 2024

About the Book: Nematodes are one of the most abundant groups of living animals, and although morphologically they are very simple, they have exploited a wide range of diverse habitats including invertebrates. There are, however, a small but significant number of beneficial entomogenous nematodes, i.e., nematodes associated (often parasitically) with insects. In addition to insects, nematodes can parasitize spiders, leeches, annelids, crustaceans and mollusks. Biocontrol agents are the natural enemies like parasitism, predation and other mechanisms for controlling plant pests. This book explains and illustrates major developments in the use of nematodes for the biological control of insects and slugs. It covers the use of nematodes like entomopathogenic nematodes, entomophilic nematodes and slug-parasitic nematodes. In this text the biology, commercial production, formulation and quality control, application technology, strategy and safety of each of the nematode groups is discussed. The book also examines the application of nematodes in different cropping systems, and the efficacy of nematodes against specific pests. Numerous informative tables and schemes present the most important aspects of the field and the latest information on suitable prevention and control measures. The book is well suited as both textbook and a reference guide for agriculturists, students of the veterinary and life sciences, and others who are interested in this field.

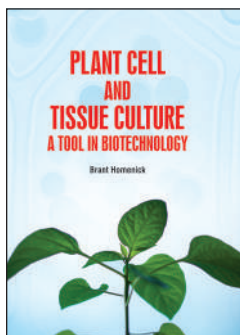


Plant Biotechnology and Transgenic Plants

Rahul Anderson

ISBN: 9781799600978 HB Price: \$ 225.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: Plant Biotechnology is a set of techniques used to adapt plants for specific needs or opportunities. Situations that combine multiple needs and opportunities are common. Finding or developing suitable plants is typically a highly complex challenge. Transgenesis is an important adjunct to classical plant breeding, in that it allows the targeted manipulation of specific characters using genes from a range of sources. This book explains the fundamental techniques essential to plant biotechnology. This text describes the various aspects of the regulation of gene expression in plants and the molecular architecture of plant genes. It covers topics on technologies and research on the engineering, synthesis, utilization, and control of primary and secondary plant metabolites such as carbohydrates, amino acids, lipids, polymers, proteins, and phytochemicals for industrial, pharmaceutical, and food and feed applications. This timely and important book presents the essence of transgenic plant production. This book provides the available methodologies and devotes chapters to transgenic plants that were produced for crop improvement and for yielding valuable products. This book is a valuable resource for plant physiologists, biochemists, plant scientists, genetic engineers, and evolutionary biologists.

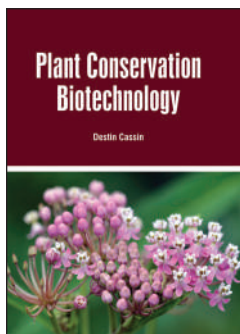


Plant Cell and Tissue Culture: A Tool in Biotechnology

Brant Homenick

ISBN: 9781799600985 HB Price: \$ 225.00 Size: 7 × 10 Pages: 364 Year: 2020 Reprint Year: 2024

About the Book: Plants cell tissue culture is a rapidly developing technology which holds promise of restructuring agricultural and forestry practices. During the last two decades cell culture have made considerable advanced in the field of agriculture, horticulture, plant breeding, forestry, somatic cell genetics, phytopathology etc. Plant tissue culture is used widely in plant science; it also has a number of commercial applications. Tissue culture is employed in; micropropagation, elimination of pathogens from plant materials, germoplasm storage, production of somaclonal variants, embryo rescue, production of haploids, production of artificial seeds, production of secondary metabolites, production of transgenic plants etc. This book provides a general introduction as well as a selected survey of key advances in the fascinating field of plant cell and tissue culture as a tool in biotechnology. Additionally, some chapters are devoted to historical developments in this domain, metabolic aspects, nutrition, growth regulators, differentiation and the development of culture systems. The present book discusses about the methods, culture preservation and stability procedures. The book will prove useful to both newcomers and specialists, and even "old hands" in tissue culture should find some challenging ideas to think about. This book is an invaluable resource for research workers, students, technocrats, entrepreneurs, institutional libraries, etc.

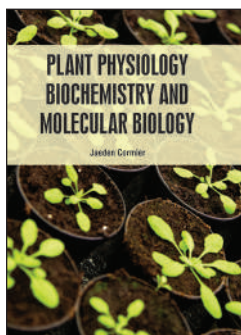


Plant Conservation Biotechnology

Destin Cassin

ISBN: 9781684699995 HB Price: \$ 230.00 Size: 7 × 10 Pages: 326 Year: 2020 Reprint Year: 2024

About the Book: Plant conservation is an international issue and one of the major aims of this book has been to explore the importance of biotechnology as evidenced by its use in major international plant genetic resource centers located in different parts of the globe. Most agronomically important plant groups have been considered and particular emphasis has been given to those species which have a significant conservation problem such as the vegetatively propagated tuber crops. Conservation of plant biodiversity can be performed in situ or ex situ. The maintenance of plant species in their natural habitat, as well as the conservation of domesticated and cultivated species on the farm or in the surroundings where they have developed their distinctive characteristics represent the in situ strategies. This book introduces the reader to biotechnological techniques which are currently used to conserve endangered plant species, genetic resources, crop plant germplasm, etc. It is believed that the book will act as a useful reference to students, researchers and professionals across a range of agricultural sciences, life science and other allied fields.



Plant Physiology, Biochemistry and Molecular Biology

Jaeden Cormier

ISBN: 9781799601029 HB Price: \$ 230.00 Size: 7 × 10 Pages: 280 Year: 2020 Reprint Year: 2024

About the Book: Plant physiology is the science which is connected to the material and energy exchange, growth and development, as well as movement of plant. Plant physiology is the science that studies plant function: what is going on in plants that accounts for their being alive. Plant physiology is overlapped with its related branch of knowledge: biochemistry, biophysics, and molecular biology. The basic knowledge of plant physiology, that is necessary for experts in agriculture, is presented in our lecture notes. Uptake and transport of water and minerals are explained in general. The nutrient supply of plant is presented in details (essential elements, solute transport, nutritional deficiencies). Most common processes of plant biochemistry and metabolism, such as photosynthesis, are highlighted. Plant growth and development is introduced with the characterization and commercial use of plant growth regulators (PGRs, plant hormones). The basic concepts of plant stress is complemented with the presentation of physiological mechanisms against different environmental stresses. The chapters deal with the technology used in current physiology, molecular biology and biotechnology. These deal primarily with core nucleic acid techniques and protein expression through microbial and genetic detection methods. Further chapters address the huge advances made in gene and genome analysis and update the rapid advances into yeast analysis, which is providing very exciting insights into molecular pathways. Molecular biology also continues to affect profoundly progress in biotechnology in areas such as vaccine development, use and application of monoclonal antibodies, clinical treatment and diagnosis, the production of transgenic animals, and many other areas of research relevant to the pharmaceutical industry. Our continued intention is that this book should primarily have a teaching function. As such, this book should prove of interest both to undergraduates studying for biological or chemical qualifications and to postgraduate and other scientific workers who need a sound introduction to this ever rapidly advancing and expanding area.

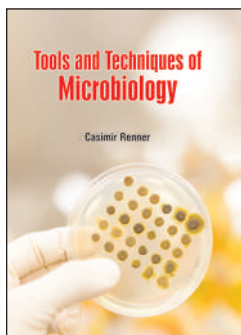


Role of Biotechnology in Exploring and Protecting Agricultural Genetic Resources

Shad Ferry

ISBN: 9781799600022 HB Price: \$ 230.00 Size: 7 × 10 Pages: 318 Year: 2020 Reprint Year: 2024

About the Book: Plant genetic resources have been defined as the genetic material of plants, which is of value as a resource for present and future generations of people. Traditionally, this definition focused on crop plants and their wild relatives, but it is increasingly considered that all plant species are a potential resource for humanity. The ultimate goal of genetic resources conservation is to ensure that the maximum possible genetic diversity of a taxon is maintained and available for utilization. Plant genetic resource conservation acts as a link between the genetic diversity of a plant and its utilization or exploitation by humans. This book provides an up-to-date overview of the current status of the world's genetic resources for food and agriculture; of the use of biotechnology tools for characterizing and conserving these genetic resources, and of the many specific issues involved in using them for these purposes in developing countries.

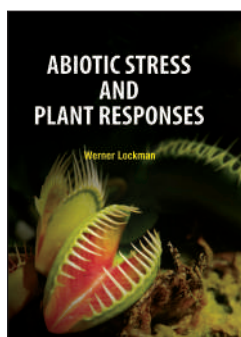


Tools and Techniques of Microbiology

Casimir Renner

ISBN: 9781799600282 HB Price: \$ 195.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: An indispensable tool in any microbiology laboratory is the inoculating loop. The loop is a piece of wire that is looped at one end. By heating up the loop in an open flame, the loop can be sterilized before and after working with bacteria. Thus, contamination of the bacterial sample is minimized. The inoculating loop is part of what is known as aseptic (or sterile) technique. Techniques also help detect the presence of bacteria that have become altered in their structure or genetic composition. The technique of replica plating relies on the adhesion of microbes to the support and the transfer of the microbes to a series of growth media. The technique is analogous to the making of photocopies of an original document. Cleaning chemicals are frequently employed to sterilize an area before and after work, among the most common of which is simple ethanol spray. Tools and Techniques of Microbiology is a book belonging to this category. The book not only gives the theoretical concepts behind the working of various tools used in the microbiology laboratory, but also details the techniques using those tools. This book is an excellent supplementary textbook, written in simple language and easy to understand even for beginners. All topics related to microbiology are covered - general aspects like techniques, culture and identification of bacteria, bacterial genetics, water, soil and food microbiology and the study of viruses and fungi.

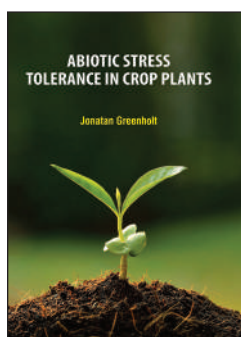


Abiotic Stress and Plant Responses

Werner Lockman

ISBN: 9781684699513 HB Price: \$ 190.00 Size: 7 × 10 Pages: 274 Year: 2020 Reprint Year: 2024

About the Book: Environmental stresses represent the most limiting factors for agricultural productivity. Apart from biotic stress caused by plant pathogens, there are a number of abiotic stresses such as extremes in temperature, drought, salinity, heavy metals and radiation which all have detrimental effects on plant growth and yield. However, certain plant species and ecotypes have developed various mechanisms to adapt to such stress conditions. Recent advances in the understanding of these abiotic stress responses provided the impetus for compiling up-to-date reviews discussing all relevant topics in abiotic stress signaling of plants in a single volume. Topical reviews were prepared by selected experts and contain an introduction, discussion of the state of art and important future tasks of the particular fields. The book describes physiological and molecular responses, role of signaling molecules and plant phenolics in abiotic stress tolerance and covers the information on salinity induced oxidative stress, strategies of halophytes to survive in a salty environment and tolerance mechanism.



Abiotic Stress Tolerance in Crop Plants

Jonatan Greenholt

ISBN: 9781799600299 HB Price: \$ 205.00 Size: 7 × 10 Pages: 292 Year: 2020 Reprint Year: 2024

About the Book: Crop plants are mostly affected by abiotic and biotic stresses; annually abiotic stresses cause more than 25% crop losses. Abiotic stresses, such as drought, extreme temperatures, heavy metal toxicity and high salinity etc, severely impair plant growth and productivity. In the present scenario of changing climate, reduced ground water table and increased un-productive lands for the production of crops have complicated the agrarian welfare worldwide. So there is an urgent need to establish ways and means to make an agrarian to be sustainable for his livelihood. ABA is an isoprenoid phytohormone, which regulates various physiological processes ranging from stomatal opening to protein storage and provides adaptation to many stresses like drought, salt, and cold stresses. Salinity is one of the major factors which reduces crop production worldwide. Plant responses to salinity are highly complex and involve a plethora of genes. Due to its multigenicity, it has been difficult to attain a complete understanding of how plants respond to salinity. Hope, this book will be of greater use for the students and researchers, particularly plant breeders and biotechnologists as well as the botanists, to understand the injury and tolerance mechanisms, and subsequently improvement of crop genotypes for abiotic stresses.



Adaptations and Responses of Woody Plants to Environmental Stresses

Branson Torphy

ISBN: 9781684699544 HB Price: \$ 185.00 Size: 7 × 10 Pages: 310 Year: 2020 Reprint Year: 2024

About the Book: Woody encroachment due to changes in climate or in the disturbance regimes has been observed throughout the savannah biome over the last century with ecological, hydrological and socioeconomic consequences. We assessed changes in tree density and basal area and estimated changes in rain interception by the canopies across a 5-Year period. Adaptations and Responses of Woody Plants to Environmental Stresses covers the latest and most significant advances in woody plant stress research. The book will provide you with innovative research on the propagation in woody plants, the biology of dormancy induction and release in woody plants—physiologic, molecular, and cellular mechanisms, etc. This book will appeal to graduate students, instructors, and researchers who specialize in plant stress physiology in botany, agriculture, horticulture, landscape design, or forestry.

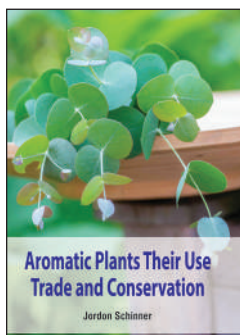


Air Pollution and Its Impacts On Plant Growth

Rafael Streich

ISBN: 9781684699629 HB Price: \$ 190.00 Size: 7 × 10 Pages: 298 Year: 2020 Reprint Year: 2024

About the Book: There is now great concern that air pollutants (especially sulfur dioxide, ozone, and oxides of nitrogen) can alter the physiological processes of plants, thereby affecting patterns of growth. Air pollutants cause damage to leaf cuticles and affect stomatal conductance. They can also have direct effects on photosynthetic systems, leaf longevity, and patterns of carbon allocation within plants. Pollutants interact with other environmental factors, and may alter plant-environment relationships on a regional scale. In this book, Rafael Streich summarizes current knowledge of the effects of air pollutants on plant growth and physiology, and indicate the new directions of research now under way in North America and Europe.

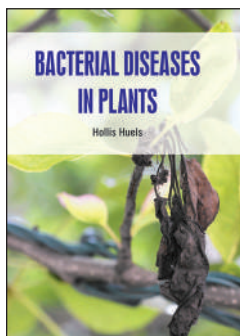


Aromatic Plants Their Use Trade and Conservation

Jordon Schinner

ISBN: 9781799600916 HB Price: \$ 230.00 Size: 7 × 10 Pages: 316 Year: 2020 Reprint Year: 2024

About the Book: Aromatic plants are a special kind of plants used for their aroma and flavour. Many of them are also used for medicinal purposes. Aromatic plants are from a numerically large group of economically important plants. These are increasing demand for essential oils, aroma chemicals drugs and pharmaceuticals in the world market since two decades. Aromatic compounds are present in plants i.e. in root, wood, bark, foliage, flower, fruit, seed etc. Aromatic plants are mainly exploited for essential oil extraction for applications in industries, for example, in cosmetics, flavoring and fragrance, spices, pesticides, repellents and herbal beverages. Although several medicinal plants have been studied to treat various conventional ailments only a handful studies are available on aromatic plants, especially for radioprotection. Aromatic plants and their parts are the source of essential oils, resins, turpentine, flavors and fragrances which can be used in the preparation of traditional medicines as well as in industry. This is a comprehensive book on the cultivation of aromatic plants grown or found in different parts of the world. It covers nomenclature, description, distribution, cultivation, processing, physical and chemical properties and uses of more than four hundred genera and a large number of species, which would be of special interest to readers. This will be an useful and handy reference book for aromatic plant collectors, perfumers, amateur and professional gardeners, food flavour and perfume industries, farmers, processing personnel, entrepreneurs, extension workers, exporters, students, teachers and scientists.



Bacterial Diseases in Plants

Hollis Huels

ISBN: 9781799600138 HB Price: \$ 195.00 Size: 7 × 10 Pages: 278 Year: 2020 Reprint Year: 2024

About the Book: The Bacterial Diseases has been carefully compiled and edited to meet the long felt needs of increasingly large number of those who have to deal with the different aspects of human diseases in colleges, universities and research institutes. It provides a stimulating and important new view of interaction between animals and pathogens causing diseases. Although considered structurally simple, bacteria are extremely diverse from a metabolic standpoint and are found almost everywhere on Earth in vast numbers-from living in jet fuel and on the rims of volcanoes to thriving in hydrothermal vents deep on the ocean floor. Most plant pathogenic bacteria belong to the following genera: Erwinia, Pectobacterium, Pantoea, Agrobacterium, Pseudomonas, Ralstonia, Burkholderia, Acidovorax, Xanthomonas, Clavibacter, Streptomyces, Xylella, Spiroplasma, and Phytoplasma. Plant pathogenic bacteria cause many different kinds of symptoms that include galls and overgrowths, wilts, leaf spots, specks and blights, soft rots, as well as scabs and cankers. In contrast to viruses, which are inside host cells, walled bacteria grow in the spaces between cells and do not invade them. The book is intended to acquaint students of various fields involved directly or indirectly with the major principles of human diseases. The book may be helpful as well to practitioners and those engaged in medical research.

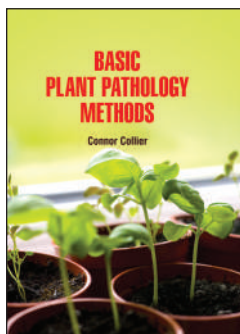


Bacterial Plant Pathology

Glen Langosh

ISBN: 9781799600923 HB Price: \$ 230.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: Plant pathogenic bacteria cause many serious diseases of plants throughout the world, but fewer than fungi or viruses, and they cause relatively less damage and economic cost. Most plants, both economic and wild, have innate immunity or resistance to many pathogens. However, many plants can harbor plant pathogens without symptom development (asymptomatic). Many people know that plants can cause disease due to bacteria if ingested after not being properly cleaned. The most well-known of these diseases is e.colli or listeria. However, what many people don't know is that plants themselves can also get diseases caused by bacteria that damage the integrity of the plant's cells. While most bacteria are harmless to plants, there are some varieties that can cause tremendous destruction to the plant and kill it. These are plant pathogens. Bacterial diseases are widespread and are difficult to identify and to control. Few pesticides are available for use in control, and many plant pathologists are not well trained in the management of bacterial diseases. Bacterial Diseases of Crop Plants offers concise information on bacterial diseases of crops, proving a valuable asset to students, scientists in industry and academia, farmers, extension workers, and those who deal with crops that are vulnerable to bacterial diseases. The book provides thorough information about bacteria and bacterial plant diseases. It covers, history, structure, classification, special DNA characteristics and special activities of bacteria.

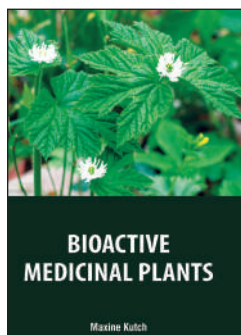


Basic Plant Pathology Methods

Connor Collier

ISBN: 9781799600930 HB Price: \$ 230.00 Size: 7 × 10 Pages: 310 Year: 2020 Reprint Year: 2024

About the Book: Plant Pathology deals with the diseases caused by fungi, bacteria, virus and nematodes and their management. The scientific principles involved in plant disease control, however came to light only with our understanding of the microbial nature of the diseases and the life cycle of the pathogens. Plant Pathology deals with the diseases caused by fungi, bacteria, virus and nematodes and their management. The scientific principles involved in plant disease control, however came to light only with our understanding of the microbial nature of the diseases and the life cycle of the pathogens. The scientific approach to the problem has yielded fruitful results of great significance, mainly through the various control methods to combat various enemies of crop plants. Plant pathologists are responsible for studying plant diseases, and their studies include various aspects of plant diseases, such as the organisms and environmental conditions that cause disease in plants, the mechanisms by which these factors cause disease, the interactions between these causal agents and the plant, and methods for managing or controlling plant diseases. The science of plant pathology is closely allied with other sciences such as botany, mycology, microbiology, genetics, chemistry, horticulture, agronomy, and soil science. Plant pathologists integrate and use information from many of these sciences to develop insights into disease development and disease control. This book will be highly beneficial to students, teachers and research workers in the field of plant pathology, botany and agriculture sciences.

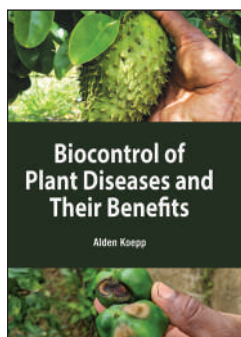


Bioactive Medicinal Plants

Maxine Kutch

ISBN: 9781799600145 HB Price: \$ 195.00 Size: 7 × 10 Pages: 324 Year: 2020 Reprint Year: 2024

About the Book: Bioactive principles, also referred as plant secondary metabolites, are derived from the products of plant primary metabolites, which are associated with the process of photosynthesis viz.; carbohydrates, amino acids and simple lipids. Medicinal plants are plants whose extracts can be used directly or indirectly for the treatment of different ailments. In the world more than 30 per cent of the pharmaceutical preparations are based on plants. Scientists throughout the world are trying to explore the precious assets of medicinal plants to help the suffering humanity. They have shown to exhibit chemoprevention and chemotherapeutic effects not only in cell lines but also in some clinical trials. This section offers a few examples of plant-derived compounds that have anticancer therapeutic properties and which offer no harm to healthy cells. Herbs, plant extracts, botanicals, spices, and supplements are becoming increasingly popular with patients, including those struggling with serious illnesses like mesothelioma. While there are many unfounded claims about plants and herbs treating or curing cancer, these natural substances should not replace traditional medical treatment. The present book explores the recent developments in the field of botanical medicine. It provides vital information on various bioactive compounds present in plants and their use in the synthesis of pharmaceuticals.

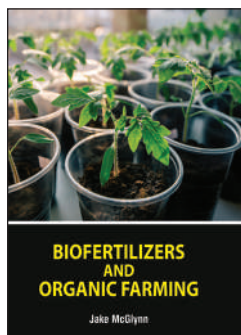


Biocontrol of Plant Diseases and Their Benefits

Alden Koepp

ISBN: 9781684699711 HB Price: \$ 195.00 Size: 7 × 10 Pages: 290 Year: 2020 Reprint Year: 2024

About the Book: In general, a plant becomes diseased when it is continuously disturbed by some causal agent that results in an abnormal physiological process that disrupts the plant's normal structure, growth, function, or other activities. This interference with one or more of a plant's essential physiological or biochemical systems elicits characteristic pathological conditions or symptoms. Plant diseases can be broadly classified according to the nature of their primary causal agent, either infectious or noninfectious. Infectious plant diseases are caused by a pathogenic organism. Biological Control of Plant Diseases and Weeds has been prepared by accumulating information on use and application of biological control and their characters. This book will provide base information to the teachers of the subject of biological control.

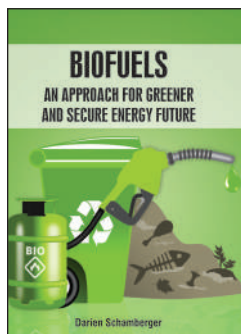


Biofertilizers and Organic Farming

Jake McGlynn

ISBN: 9781799600718 HB Price: \$ 230.00 Size: 7 × 10 Pages: 290 Year: 2020 Reprint Year: 2024

About the Book: The increasing demand for biofertilizers and the awareness among farmers and planters in the use of biofertilizers have paved way for the fertilizer manufacturers and new entrepreneurs to get into biofertilizers production. It is one of the important components of integrated nutrient management, as they are cost effective and renewable source of plant nutrients to supplement the chemical fertilizers for sustainable agriculture. Organic farming system in India is not new and is being followed from ancient time. Organic farming has emerged as an important priority area globally in view of the growing demand for safe and healthy food and long term sustainability and concerns on environmental pollution associated with indiscriminate use of agrochemicals. This book has been written for agricultural planners, soil scientists, biologists, microbiologists, students, teachers, fertilizer industry, personnel research and development units, organisation engaged in biofertilizer production, training centres, all those interested in the efficient use and recycling of wastes, resource management and sustainable farming.

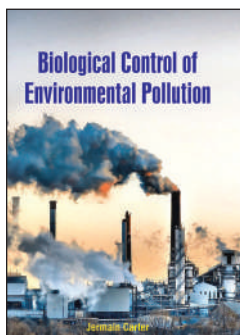


Biofuels: An Approach for Greener and Secure Energy Future

Darien Schamberger

ISBN: 9781799600527 HB Price: \$ 195.00 Size: 7 × 10 Pages: 310 Year: 2020 Reprint Year: 2024

About the Book: Biofuels are alternative fuels made from plant and plant-derived resources. Biofuels are used mainly for transportation. There are two types of biofuels: bioethanol and biodiesel. Bioenergy is energy derived from biofuels. Biofuels are fuels produced directly or indirectly from organic material - biomass - including plant materials and animal waste. Overall, bioenergy covers approximately 10% of the total world energy demand. Traditional unprocessed biomass such as fuelwood, charcoal and animal dung accounts for most of this and represents the main source of energy for a large number of people in developing countries who use it mainly for cooking and heating. Biofuel, any fuel that is derived from biomass-that is, plant or algae material or animal waste. Biofuel is commonly advocated as a cost-effective and environmentally benign alternative to petroleum and other fossil fuels, particularly within the context of rising petroleum prices and increased concern over the contributions made by fossil fuels to global warming. Many critics express concerns about the scope of the expansion of certain biofuels because of the economic and environmental costs associated with the refining process and the potential removal of vast areas of arable land from food production. The biofuels book provides a roadmap for understanding the broad sweep of technological and energy policy issues that intermingle and intertwine.

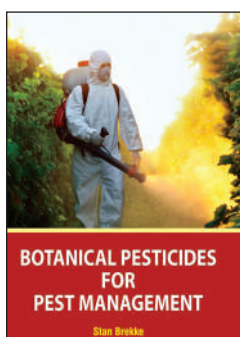


Biological Control of Environmental Pollution

Jermain Carter

ISBN: 9781799600534 HB Price: \$ 195.00 Size: 7 × 10 Pages: 306 Year: 2020 Reprint Year: 2024

About the Book: Biological control, the use of living organisms to control pests. A natural enemy such as a parasite, predator, or disease organism is introduced into the environment of a pest or, if already present, is encouraged to multiply and become more effective in reducing the number of pest organisms. Examples of biological control include the destruction of the citrophilus mealybug in California by two parasitic species of chalcid wasps imported from Australia, *Coccophagus gurneyi* and *Tetraneura pretiosus*; the effective predation of an Australian ladybird beetle, or vedalia beetle (*Rodolia cardinalis*), on the cottony cushion scale in California; the limiting of the proliferation of the European rabbit in Australia by introduction of myxoma virus (which causes the disease myxomatosis); the control of Japanese beetles by *Bacillus popilliae*, which causes milky disease. More expensive, there has been a growing interest in ways to incorporate prevention in the design of industrial processes - with the objective of eliminating harmful environmental effects while promoting the competitiveness of industries. Among the benefits of pollution prevention approaches, clean technologies and toxic use reduction is the potential for eliminating worker exposure to health risks. This book contains a mine of information which can be of great value to researchers, environmentalists, social activists, policy planners, etc.

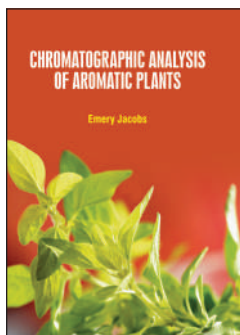


Botanical Pesticides for Pest Management

Stan Brekke

ISBN: 9781684699735 HB Price: \$ 200.00 Size: 7 × 10 Pages: 330 Year: 2020 Reprint Year: 2024

About the Book: Medicinal plants are the most important source of life saving drugs for the majority of the world's population. The biotechnological tools are important to select, multiply and conserve the critical genotypes of medicinal plants. In-vitro regeneration holds tremendous potential for the production of high-quality plant-based medicine. Medicinal plants are the most important source of life saving drugs for the majority of the world's population. The biotechnological tools are important to select, multiply and conserve the critical genotypes of medicinal plants. Biotechnology offers several choices through which secondary metabolism in medicinal plants can be altered in innovative ways, to overproduce phytochemicals of interest, to reduce the content of toxic compounds or even to produce novel chemicals. Medicinal and aromatic plants constitute a major segment of the flora, which provides raw materials for use in the pharmaceuticals, cosmetics, and drug industries. The indigenous systems of medicines, developed in India for centuries, make use of many medicinal herbs. These systems include Ayurveda, Siddha, Unani, and many other indigenous practices. More than 9,000 native plants have established and recorded curative properties and about 1500 species are known for their aroma and flavour. This book will cater to the immediate needs of the students, researchers, faculty members and pharmaceutical industries.

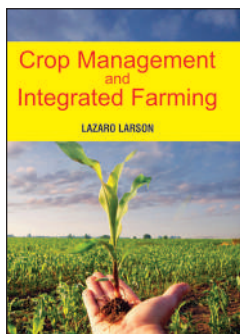


Chromatographic Analysis of Aromatic Plants

Emery Jacobs

ISBN: 9781799600947 HB Price: \$ 230.00 Size: 7 × 10 Pages: 278 Year: 2020 Reprint Year: 2024

About the Book: The analytical techniques that are applied for medicinal and aromatic plants are used particularly for the analysis of secondary substances, minor components in plants that are distributed very inhomogeneously. Therefore, the main analytical problems that exist are related to correct sample preparation and separation of the analytes. Chromatography is a laboratory technique for the separation of a mixture. The mixture is dissolved in a fluid called the mobile phase, which carries it through a structure holding another material called the stationary phase. The various constituents of the mixture travel at different speeds, causing them to separate. The separation is based on differential partitioning between the mobile and stationary phases. Subtle differences in a compound's partition coefficient result in differential retention on the stationary phase and thus affect the separation. Aromatic plants may contribute for human health promotion due to their antioxidant properties and also by replacing added salt in foods. Phenolic compounds are one of the major groups contributing for aromatic plants properties, including the prevention of cancer, cardiovascular and neurodegenerative diseases. This book is essential for analysts, quality assurance professionals, and regulators seeking a comprehensive text on how to use HPTLC to determine whether botanicals comply with current, good manufacturing practices.

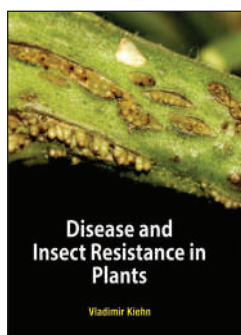


Crop Management and Integrated Farming

Lázaro Larson

ISBN: 9781799600725 HB Price: \$ 230.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Crop management practices for the safe use of salt-affected soils and saline water primarily consists of growing suitable salt-tolerant crops, managing seedbeds, and grading fields to minimize local accumulation of salts, soil management, improving irrigation efficiency and soil, water, and salinity monitoring for assessing leaching and drainage requirements. Integrated farming is a whole farm management system which aims to deliver more sustainable agriculture. It is a dynamic approach which can be applied to any farming system around the world. It involves attention to detail and continuous improvement in all areas of a farming business through informed management processes. Consider using combinations of species. You also need to decide where cover crops best fit in your system-planted following the main crop, intercropped during part or all of the growing of the main crop, or grown for an entire growing season in order to build up the soil. The goal, while not always possible to attain, should be to have something growing in your fields (even if dormant during the winter) all the time. The book fills the need for an up-to-date comprehensive text on crop management and integrated farming under varying situations and covers comprehensively the content of the courses of Field Crops and Farming Systems in Agronomy offered for the students at under graduate and post graduate levels of agricultural universities in the country.

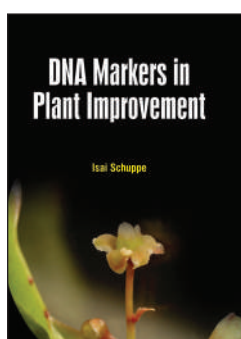


Disease and Insect Resistance in Plants

Vladimir Kiehn

ISBN: 9781684699803 HB Price: \$ 185.00 Size: 7 × 10 Pages: 296 Year: 2020 Reprint Year: 2024

About the Book: Insect-resistant crop varieties suppress insect pest abundance or elevate the damage tolerance level of the plants. In other words, insect-resistant plants alter the relationship an insect pest has with its plant host. How the relationship between the insect and plant is affected depends on the kind of resistance. The book covers in detail the principles and practices of conventional plant breeding as well as newer and recent biotechnological tools. The book is suitable for use as an advanced text. A basic knowledge of plant pathogens, insect-pests and their genetics is assumed. The book can be used as reference book by plant pathologists, entomologists and geneticists engaged in developing germplasm, with resistance to biotic stresses. Attempts have been made to draw specific examples from as many different crop plants and their harmful parasites as possible.

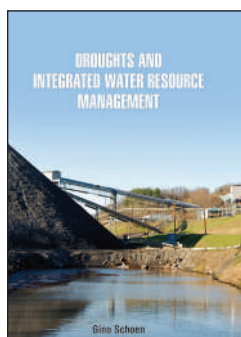


DNA Markers in Plant Improvement

Isai Schuppe

ISBN: 9781684699827 HB Price: \$ 205.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: The improvement made in DNA marker innovation has been sublime and moving. DNA markers have given profitable devices in different investigation going from phylogenetic examination to the positional cloning of qualities. The improvement of high-thickness sub-atomic maps which has been encouraged by PCR-based markers, have made the mapping and labeling of practically any characteristic conceivable. With the approach of DNA marker innovation, a few kinds of DNA markers and atomic rearing procedures are presently accessible to plant reproducers and geneticists, helping them to defeat huge numbers of the issues looked during customary reproducing. This book expounds on the utilizations of DNA marker innovation in the hereditary examination and improvement of plants. This book talks about the utilization of DNA marker innovation for the hereditary improvement of plants. Its substance will be gigantically valuable for educators, understudies and analysts of changed fields of life sciences. This book may have its limitations, but it remains an excellent reference that should be recommended for any teaching of crop physiology at the graduate level. I am also sure reading it would be beneficial even for confirmed crop physiologists.

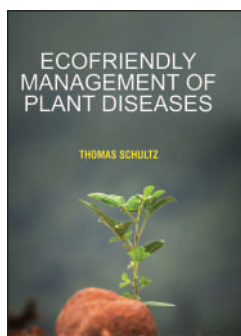


Droughts and Integrated Water Resource Management

Gino Schoen

ISBN: 9781799600541 HB Price: \$ 195.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: A drought or drouth is a natural disaster of below-average precipitation in a given region, resulting in prolonged shortages in the water supply, whether atmospheric, surface water or ground water. A drought can last for months or years, or may be declared after as few as 15 days. It can have a substantial impact on the ecosystem and agriculture of the affected region and harm to the local economy. Annual dry seasons in the tropics significantly increase the chances of a drought developing and subsequent bush fires. Periods of heat can significantly worsen drought conditions by hastening evaporation of water vapour. However, these ideas have been formalized over time in what has now become, in capitals, Integrated Water Resources Management (IWRM), with specific prescriptive principles whose implementation is often supported by donor funding and international advocacy. IWRM has now become an end in itself, in some cases undermining functioning water management systems, in others setting back needed water reform agendas, and in yet others becoming a tool to mask other agendas. Critically, the current monopoly of IWRM in global water management discourse is shutting out alternative thinking on pragmatic solutions to existing water problems. The book will be of great use for researchers, planners and development workers.

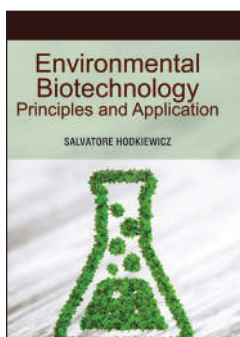


Ecofriendly Management of Plant Diseases

Thomas Schultz

ISBN: 9781799600558 HB Price: \$ 205.00 Size: 7 × 10 Pages: 314 Year: 2020 Reprint Year: 2024

About the Book: The purpose of this book is to introduce students to the basic principles and concepts of plant disease management. Plant diseases are often classified by their physiological effects or symptoms. Many diseases, however, produce practically identical symptoms and signs but are caused by very different microorganisms or agents, thus requiring completely different control methods. Classification according to symptoms is also inadequate because a causal agent may induce several different symptoms, even on the same plant organ, which often intergrade. Classification may be according to the species of plant affected. The use of resistant varieties is an important strategy in IDM. Breeding for disease and insect resistance has always been considered an important part of apple breeding programs, but the focus has been on field production and little attention has been devoted to postharvest disease resistance and associated decays. The diseases of economic importance caused by fungi, bacteria, viruses and virus like organisms of each crop are covered, describing their history, distribution, losses incurred, symptoms latest diagnostic tools, epidemiology and integrated applied management approaches including cultural, chemical, genetic resources, use of bio control agents being adopted worldwide.

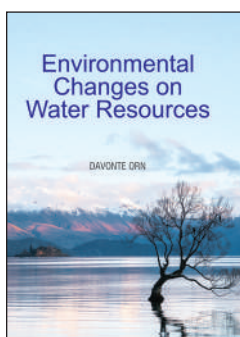


Environmental Biotechnology: Principles and Application

Salvatore Hodkiewicz

ISBN: 9781799600565 HB Price: \$ 195.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: Environmental biotechnology can be defined as a discipline that studies the application of biotechnology to solve environmental problems. While it encompasses the traditional processes of potable water production, wastewater purification, solid waste treatment and soil and sediment clean up, it also includes newer developments such as the use of bio-pesticides, bio-remediation of recalcitrant pollutants and bio sensors for environmental monitoring. Biotechnology is the umbrella term that covers various techniques to restore ecological balance. It stands on the understanding of molecular basis of cell functions and our ability to alter cell functions to produce products required by the society. The International Society of Environmental Biotechnology defines environmental biotechnology as "the development, use and regulation of biological systems for remediation of contaminated environments (land, air, water), and for environment-friendly processes (Green manufacturing technologies and sustainable development)" This book will be helpful to students, scholars, doctoral candidates, policy analysts, NGO practitioners, etc interested in the biotechnology studies. This publication provides unique resources for understanding the very many areas of environmental biotechnology. This book sums up the concepts of environmental biotechnology and is a valuable source of information.

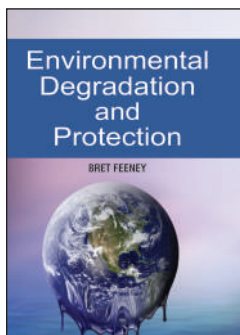


Environmental Changes On Water Resources

Davonte Orn

ISBN: 9781799600572 HB Price: \$ 195.00 Size: 7 × 10 Pages: 302 Year: 2020 Reprint Year: 2024

About the Book: Water is an increasingly critical issue at the forefront of global policy change, management and planning. There are growing concerns about water as a renewable resource, its availability for a wide range of users, aquatic ecosystem health, and global issues relating to climate change, water security, water trading and water ethics. Events in the last year reminded the world that the climate is changing. The temperature in the Arctics, warming about twice as fast as other parts of the planet, soared again during parts of 2017 and the region continued to lose sea ice and permafrost. Incidentally, our country is endowed with vast seawater resources covering large parts for over a dozen of states and union territories. Water resources are important to both society and ecosystems. We depend on a reliable, clean supply of drinking water to sustain our health. We also need water for agriculture, energy production, navigation, recreation, and manufacturing. Many of these uses put pressure on water resources, stresses that are likely to be exacerbated by climate change. Featuring contributions by experts from nine countries, this book presents the latest concepts and data on waterlogging and salinity, sedimentation, land use, eutrophication, fisheries, and aquatic weeds. Readers will also get information on social impacts, economic instruments, initiating environmentally responsible projects, water quality modeling and monitoring, water reuse and more.

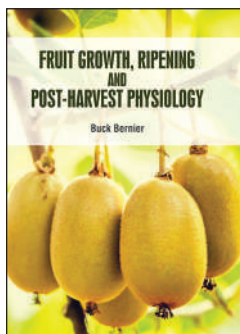


Environmental Degradation and Protection

Bret Feeney

ISBN: 9781799600589 HB Price: \$ 195.00 Size: 7 × 10 Pages: 314 Year: 2020 Reprint Year: 2024

About the Book: Environmental degradation and economic decline (aggravating poverty) feed on each other, and the fate of the poor and the fate of the planet (earth) have become tightly entwined. Economic deprivation and environmental degradation thwarts all efforts towards sustainable development. Environmental degradation is one of the largest threats that are being looked at in the world today. The United Nations International Strategy for Disaster Reduction characterizes environmental degradation as the lessening of the limit of the earth to meet social and environmental destinations, and needs. Environmental management is considered to be a major guideline factors for the country's economic development. Environmental Protection has attained vital importance and no section of society can overlook it. This book is the outcome of joint efforts of the scientific community and general public for developing realistic strategies for environmental management in urban as well as rural areas. The book would be highly useful for students and researchers engaged in the study of environment. It would also be useful to government executives and NGOs concerned with environment and pollution problems. Since the laymen are deeply interested in clean environment, the book would be of great interest to them.

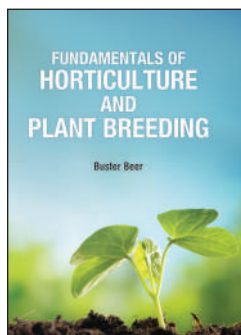


Fruit Growth, Ripening and Post-Harvest Physiology

Buck Bernier

ISBN: 9781799600879 HB Price: \$ 230.00 Size: 7 × 10 Pages: 332 Year: 2020 Reprint Year: 2024

About the Book: Fruit evolved as vehicles for production and dispersal of seeds. Humans then imposed further selection pressures to develop products for our use. Such development has accelerated over the past century. Our concept of a fruit as a sweet and fleshy object for eating is really quite recent in evolutionary terms. As fruit grow, proportions of cell wall, carbohydrate, organic acid, lipid, phospholipid and volatile (aroma) compounds change dramatically; and within each of those groups there are changes in the proportion of individual group members. Several processes take place as fruit ripen and become edible, and then senesce. These changes may take place while fruit are still attached to the plant or after harvest. Tomato, banana and avocado are examples of fruit that at harvest can be at a mature green but unripe stage and are inedible until subsequent ripening processes have occurred. During the twentieth century, additional selection pressures have been applied to temperate fruit species in a drive for cultivars that are well suited to postharvest handling and storage. This has not been true for most tropical fruit, which have had less selection for such characteristics and which still present challenging problems for postharvest researchers and breeders. Accordingly, fruits account for a substantial fraction of the world's agricultural output, and some (such as the apple and the pomegranate) have acquired extensive cultural and symbolic meanings. Ripening is a process in fruits that causes them to become more palatable. In general, a fruit becomes sweeter, less green, and softer as it ripens.

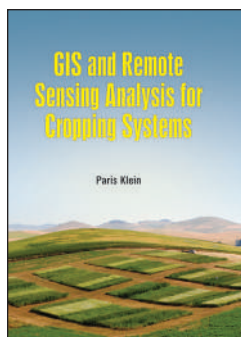


Fundamentals of Horticulture and Plant Breeding

Buster Beer

ISBN: 9781799600886 HB Price: \$ 230.00 Size: 7 × 10 Pages: 322 Year: 2020 Reprint Year: 2024

About the Book: Horticulture is associated with the cultivation of vegetables, fruits, flowers, crops, tuber crops and medicinal, aromatic and ornamental plants. The curriculum will enable you to gain knowledge about crop production, plant propagation, plant breeding, genetic engineering, preparation of soil and plant physiology and biochemistry and simultaneously can work in various fields including floral design, garden centers, teaching, fruit and vegetable production, arboriculture, landscape construction, etc. Horticulture is the study of plant production techniques that are aimed at intensive cultivation, high-yielding variety crops and plant propagation. Plant breeding concentrates on the growing of plants that have favorable characteristics for longevity and improved yields. Horticulture and plant breeding are important sectors of the food industry. Plant breeding, science of altering the genetic pattern of plants in order to increase their value. Increased crop yield is the primary aim of most plant breeding programs; advantages of the hybrids and new varieties developed include adaptation to new agricultural areas, greater resistance to disease and insects, greater yield of useful parts, better nutritional content of edible parts, and greater physiological efficiency. Other goals are adaptation of crops to modern production techniques such as mechanical harvesting and improvement in the market quality of the product. This book includes some of the vital pieces of work being conducted across the world, on various topics related to plant breeding and horticulture. The various studies that are constantly contributing towards advancing technologies and evolution of this field are examined in detail. Students, researchers, experts and all associated with this field will benefit alike from this book.



GIS and Remote Sensing Analysis for Cropping Systems

Paris Klein

ISBN: 9781799601074 HB Price: \$ 225.00 Size: 7 × 10 Pages: 350 Year: 2020 Reprint Year: 2024

About the Book: With the help of this book Satellite technology enables us to draw a global picture of how climate is changing, instead of depending on individual point observatories. In the future, data from satellites will become richer and the inferred trends will become sharper, and it will be immensely useful in monitoring adaptation too. We use remote sensing data to assess an ecosystem's response to climate change and their impacts. We do this by tracking changes in vegetation growth and, in turn, the carbon cycle. Changes in climate impact vegetation as it alters or disturbs the growing season for plants, creating an imbalance in the normal carbon cycle that we assume to be true. Remote sensing data is being used to monitor the growing season with precision. With the advancement in satellite products, we are getting up to near daily data, which will enable us to pinpoint exactly when the growing season will start and end. This data is then used as a starting point to infer the specifics of a vegetation growth cycle and productivity. This book helps to collect the information on crop statistics is required for planning and decision making purposes, such as, distribution and storage of food grains, Govt. policies, pricing, procurement and food security and so on. Contemporary techniques of satellite remote sensing in such decision making. Remote sensing data does provide many advantages over conventional methods, particularly in terms of timely decision making mechanisms, spatial depiction and coverage including cost effectiveness. Space data is used in addressing in many critical aspects, such as, crop area estimation, crop yield & production estimation, crop condition, deriving basic soil information, cropping system studies, experimental crop insurance, etc.

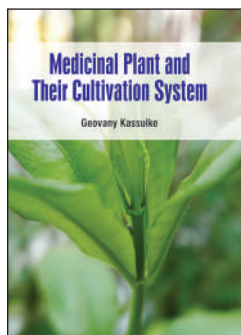


Horticulture Pest Control and Management

Marlon Sporer

ISBN: 9781799600893 HB Price: \$ 230.00 Size: 7 × 10 Pages: 324 Year: 2020 Reprint Year: 2024

About the Book: Pests cause severe injury to horticultural crops in various ways, direct as well indirect. A classic in its own subject this book contains necessary scientific information useful for recognizing the many symptoms of pest damage to horticultural plants and describes the different control measures: cultural, mechanical, physical, biological and chemical. The diseases of horticultural crops not only reduce the productive capability but also adversely affect the quality with the changing climate, horticultural crops have become vulnerable to hazards of plants and diseases, playing a major role in causing threat to food security. The concept of IPM has been developed to cope up with the diversity and complexity of pest problems which limit the production as well as the quality of produce. The horticultural crops are very important diversified group of crops which are susceptible to a large number of insects causing reduction in yield. In traditional agriculture the insect pests were kept under check by various cultural and mechanical approaches; while modern agriculture, relies upon the use of synthetic organic insecticides which has resulted in aggravated resistance and environmental problems. This book will cater the needs of students, teachers, researchers of plant pathology, horticulture, seed companies and growers who want to identify and manage diseases.



Medicinal Plant and Their Cultivation System

Geovany Kassulke

ISBN: 9781684699926 HB Price: \$ 190.00 Size: 7 × 10 Pages: 378 Year: 2020 Reprint Year: 2024

About the Book: Medicinal Plants occupy an important position in the socio-economic, cultural, spiritual and medical arena. Their sustainable cultivation, management and harvesting can conserve biodiversity, sustain human and environmental health, generate employment, income and export earnings. The book 'Medicinal Plant and Their Cultivation System' provides comprehensive coverage of the fundamental principles and current practices and trends in the field of conservation and cultivation of medicinal plants. This book updates the subject matter, illustrations and problems to incorporate new concepts and issues related to ethnobotany, herbal medicines, conservation and cultivation and utilization of medicinal plants. We hope this book will provide a multi-disciplinary forum to explore emerging areas in the field of ethnobotany, medicinal plants and herbal medicines. This book will be very useful to the students, teachers, researchers, extension workers and growers of medicinal and aromatic crops.

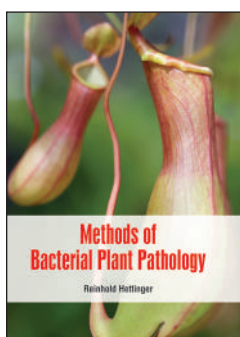


Methodology of Plant Genetic Engineering

Ronny Weimann

ISBN: 9781684699933 HB Price: \$ 205.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Plant genetics has emerged as an exciting area of research by creating unprecedented opportunities for the manipulation of biological systems of plants. The applications of plant genetics to increase crop field, improve crop quality, and reduce production costs have been considerable. The new transgenic techniques create new gene combinations with novel traits such as resistance to pests, disease and herbicides. Today it is possible to develop plants that provide ingredients for healthier nutrition, grow in unfavourable conditions or for form substances that are otherwise produced by means of a complex chemical process these transgenic crop plants hold great promise for the world agriculture. This book provides an overview of the rapidly developing field of plant genetics and their application. The text has been prepared in simple language for easy understanding of the complicated topics of plant genetics. It gives the reader not only general appreciation of genetics as a whole but also adapted to the needs of the student of botany and other allied fields. The book is intended primarily for undergraduates and postgraduates in biology, botany and biotechnology, whereas it can be used as a reference for researchers and post-doctoral students, university professors and instructors.

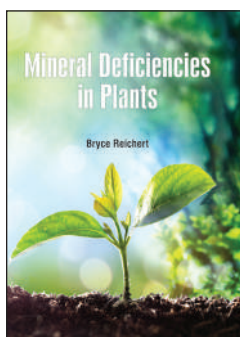


Methods of Bacterial Plant Pathology

Reinhold Hettinger

ISBN: 9781684699940 HB Price: \$ 230.00 Size: 7 × 10 Pages: 358 Year: 2020 Reprint Year: 2024

About the Book: Considering the rapid pace with which biotechnology has been advancing in its progress, it comes as no surprise that plant pathology today has undergone vast changes. The study of plant diseases, their causes and the changes they produce in the cells, tissues and organs has been greatly aided by the continual enhancement of biotechnology principles and processes, particularly that of genetic engineering. This book is an attempt in the process to provide readers with a relevant book which acquaints them with the current developments and advances in the field of plant pathology. The book gives space to covering critical perspectives which look into the future prospects, challenges and advantages offered by these trends. The book is intended as a reference book for practical classes of under graduate and post graduate students for studying bacterial diseases of plants.

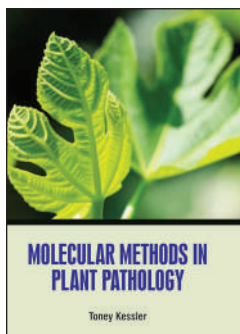


Mineral Deficiencies in Plants

Bryce Reichert

ISBN: 9781799600237 HB Price: \$ 195.00 Size: 7 × 10 Pages: 330 Year: 2020 Reprint Year: 2024

About the Book: Nutrient deficiency symptoms appear only after the nutrient supply is so low that the plants can no longer function properly. In such cases, it would have been profitable to have applied fertilizer long before the symptoms appeared. If the symptoms are observed early, it might be corrected during the growing season. Since the objective is to get the limiting nutrient into the plant as quickly as possible, with some nutrients and under some conditions this may be accomplished with foliar applications or side dressings. This leads to the abnormal conditions recognized as symptoms. Visual evaluation of nutrient stress should be used only as a supplement to other diagnostic techniques (i.e., soil and plant analysis). Deficiencies can occur even when the nutrient is in optimal supply if there are other factors like water logging, which can affect the soil's ability to transfer the nutrient or the plant's ability to access it. For example, high pH levels in soil restrict availability of zinc, copper, manganese and iron, and dry top soil can limit the uptake of calcium and boron early in the season. The present book describes a method of recognising by sight deficiency symptoms of the various mineral plant nutrients in commonly grown agricultural and horticultural crops.

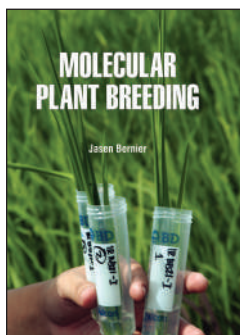


Molecular Methods in Plant Pathology

Toney Kessler

ISBN: 9781799600954 HB Price: \$ 230.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: Module is presenting facts on basic molecular techniques that are used in plant pathology intended for identification of plant pathogens. Using molecular methods for plant disease diagnosis provides diagnosticians with a number of advantages over more traditional methods. Plant pathology is an issue of direct relevance to crop yield and hence of major economic importance. Having a thorough and comprehensive knowledge of pathogens causing plant diseases, their symptoms, effects and treatment is essential part of the curriculum of a student in the field of plant science. Techniques that may be of use in studying plant infections, such as colloidal gold cytochemistry in situ hybridisation, etc., are detailed, and the defence mechanisms of infected plants, including trees, cytolocalisation of molecules involved in host resistance, have also been discussed. With an up-to-date account of the latest trends and developments in plant pathology, and a lucid style of writing, the book is a must for academicians, researchers and students in the field agrosience, botany and plant science. The book also serves as a good reference and a text book for PG students and research scholars.

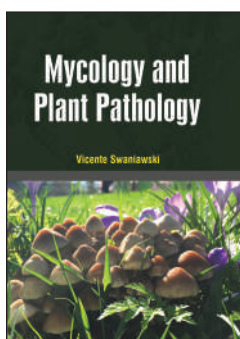


Molecular Plant Breeding

Jasen Bernier

ISBN: 9781799600251 HB Price: \$ 195.00 Size: 7 × 10 Pages: 282 Year: 2020 Reprint Year: 2024

About the Book: Molecular Plant Breeding (MPB) utilizes latest genetic technologies to develop better varieties of crop plants. Two molecular technologies, viz. molecular marker technology and transformation technology are used in molecular plant breeding. Molecular Plant Breeding attempts to present the complete picture of plant breeding ranging from the classical to the molecular approaches applied to crop improvement. The progress made in DNA marker technology has been remarkable and exciting in recent years. DNA markers have proved valuable tools in various analyses in plant breeding. Molecular breeding is of very recent origin. It developed in the 1980s with the evolution of DNA marker technologies. Molecular breeding is defined as a branch of plant breeding which utilizes molecular genetic tools and approaches for genetic improvement of crop plants. In other words, genetic improvement of crop plants for various economic traits using molecular marker and transformation technologies is referred to as molecular plant breeding. This book is designed primarily for graduate students, viz., B.Sc. agriculture and B.Sc. science students with botany as one of the subjects, who would get their first exposure to plant breeding. It would also be useful for the post-graduate students, especially in botany, and to teachers of the subject. The book is written in simple and easy to understand language.

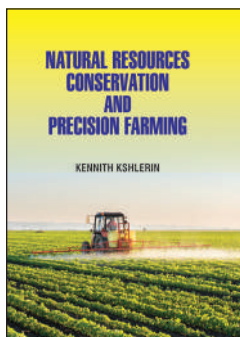


Mycology and Plant Pathology

Vicente Swaniawski

ISBN: 9781799600268 HB Price: \$ 210.00 Size: 7 × 10 Pages: 310 Year: 2020 Reprint Year: 2024

About the Book: Mycology, the study of fungi, a group that includes the mushrooms and yeasts. Many fungi are useful in medicine and industry. The fungi are a group of eukaryotic microorganisms, some of which are capable of causing superficial, cutaneous, subcutaneous, or systemic disease. Fungi are eukaryotic microorganisms. Fungi can occur as yeasts, molds, or as a combination of both forms. Some fungi are capable of causing superficial, cutaneous, subcutaneous, systemic or allergic diseases. Yeasts are microscopic fungi consisting of solitary cells that reproduce by budding. Molds, in contrast, occur in long filaments known as hyphae, which grow by apical extension. Hyphae can be sparsely septate to regularly septate and possess a variable number of nuclei. Fungi and fungal-like pathogens may be widespread or limited in distribution and have diverse impacts on human welfare. Threats to food security arising from yield reduction of staple crops may dramatically affect poor communities, particularly in developing countries. Plant pathology is the basic understanding of how plants grow, their lifecycle, and how they die. Through the perceptions of plant pathology, improvements on plant production, health, growth, disease resistance, and harvest can all be vastly improved. This book is very much useful for the students, research scholars, scientists, academicians and farmers.

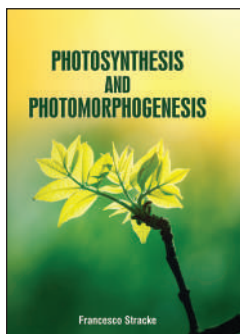


Natural Resources Conservation and Precision Farming

Kennith Kshlerin

ISBN: 9781799600732 HB Price: \$ 230.00 Size: 7 × 10 Pages: 250 Year: 2020 Reprint Year: 2024

About the Book: Natural resources, especially water and soil, are essential for the function and structure of agricultural production systems and for the overall social and environmental sustainability. Natural resources are utilized by human beings either directly or indirectly for survival. The examples of natural resources are air, soil, water, sunshine, coal, plants, animals, and minerals. Additionally, nature acts as the sole provider for our fundamental needs which includes food, clothing and shelter. Conservation of natural resources presents challenges to the policy makers, in part because now it is not a problem of any particular nation but a global one. Precision Farming is helping many farmers worldwide to maximize the effectiveness of the crop inputs including seed quality, fertilizers, pesticides and irrigation water. Today, because of increasing input costs and decreasing commodity prices, the farmers are looking for new ways to increase efficiency and reduce costs. In this regard, Precision Farming is an alternative to improve profitability and productivity. Any part of our natural environment- such as land, water, air, minerals, forest, rangeland, wildlife, fish or even human population-that man can utilize to promote his welfare may be regarded as a natural resource.

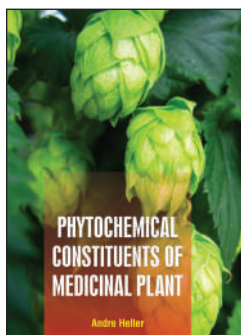


Photosynthesis and Photo Morphogenesis

Francesco Stracke

ISBN: 9781799600275 HB Price: \$ 205.00 Size: 7 × 10 Pages: 310 Year: 2020 Reprint Year: 2024

About the Book: The photosynthetic process depends on a set of complex protein molecules that are located in and around a highly organized membrane. Through a series of energy transducing reactions, the photosynthetic machinery transforms light energy into a stable form that can last for hundreds of millions of years. The process of photosynthesis takes place in the chloroplasts, specifically using chlorophyll, the green pigment involved in photosynthesis. Photosynthesis takes place primarily in plant leaves, and little to none occurs in stems, etc.,. Photomorphogenesis is often defined as light-regulated plant development, but there are also changes in morphology and/or cell structure and function, which occur as transient acclimatizations to a changing environment, which are also light regulated. Particularly if this more inclusive definition is used, photomorphogenesis is a process common to organisms well beyond the plant kingdom. While there may be only a few examples of photomorphogenesis in the animal kingdom, it is a common feature of development in fungi, protists, and bacteria, as well as plants. While this module will focus on what is known from studies of plant photomorphogenesis, there will be selected examples from other kingdoms. The book is designed primarily to be used as a resource book for new researchers in plant photobiology.

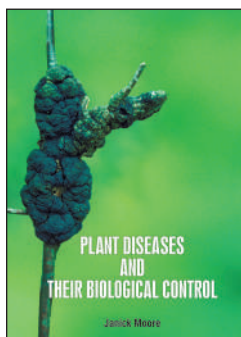


Phytochemical Constituents of Medicinal Plant

Andre Heller

ISBN: 9781799600961 HB Price: \$ 230.00 Size: 7 × 10 Pages: 296 Year: 2020 Reprint Year: 2024

About the Book: Medicinal plants and herbal preparations are gaining renowned interest in scientific communities nowadays due to their reliable pharmacological actions and affordability to common people which makes them effective in control of various diseases. Attempts have been made to include all aspects of medicinal plants. To this end chapters contain complete information on history, isolation and characterisation of active principles, transformation of medicinal system, medicinal plants widely known for their curative effects on certain diseases, export of medicinal plants and phytochemicals, suggestions for improvement of medicinal crop industry, etc. Phytochemicals are naturally occurring and biologically active plant compounds that have potential disease inhibiting capabilities. These phytochemicals are known to combat diseases due to their antioxidant effect. As a way of responding to environmental stress, many plants produce antioxidant compounds such as the polyphenolics. On the other hand, antioxidants are phytochemicals that mop up and neutralize free radicals, quenching singlet, and triplet oxygen or inducing expression of peroxides and other toxic metabolites. Medicinal plants and herbal preparations are gaining renowned interest in scientific communities nowadays due to their reliable pharmacological actions and affordability to common people which makes them effective in control of various diseases. Polygonum minus (Polygonaceae) locally known as kesum is an aromatic plant commonly used in Malay delicacies. The plant is having potential applications due to its high volatile oil constituents in perfumes and powerful antioxidant activity. A knowledge of the ethno-medicinal information and chemical constituents of plant is desirable not only for discovery of therapeutic agents but also because such information are of great value in disclosing a new source for cost effective phyto-chemicals for the synthesis of chemical substances and for discovering the actual significance of ethno-medicinal remedies.

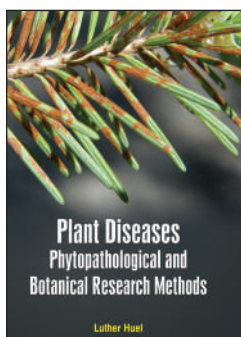


Plant Diseases and Their Biological Control

Janick Moore

ISBN: 9781799600992 HB Price: \$ 230.00 Size: 7 × 10 Pages: 274 Year: 2020 Reprint Year: 2024

About the Book: The biological control refers to the purposeful utilization of introduced or resident living organisms, other than disease resistant host plants, to suppress the activities and populations of one or more plant pathogens. The microorganisms have come under focus for the management of diseases due to their unique ability to survive in the ecosystem and reducing the severity of the diseases. Biological Control of Plant Diseases presents up-to-date research findings on disease management to provide you with a single source reference text for developing a sustainable ecosystem that doesn't depend on harmful and unhealthy agrochemicals. Biological control is the control of disease by the application of biological agents to a host animal or plant that prevents the development of disease by a pathogen. With regard to plant diseases the biocontrol agents are usually bacterial or fungal strains isolated from the endosphere or rhizosphere. Viruses can also be used as biocontrol agents and there is a resurgent interest in the use of bacterial viruses for control of plant diseases. A significant improvement have been made in different aspects of biological control of fungal plant diseases, but this area still need much more development and investigations to solve the existing problems. In order to have more effective biological control strategies in the future, it is critical to carry out more research studies on some less developed aspects of biocontrol, including development of novel formulations, understanding the impact of environmental factors on biocontrol agents, mass production of biocontrol microorganisms and the use of biotechnology and nano-technology in improvement of biocontrol mechanisms and strategies. The book will be useful and widely accepted by students, teachers, researchers, botanists, plant pathologists and agriculturists.

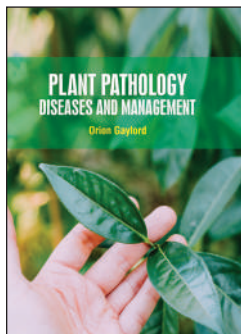


Plant Diseases: Phytopathological and Botanical Research Methods

Luther Huel

ISBN: 9781799600008 HB Price: \$ 190.00 Size: 7 × 10 Pages: 292 Year: 2020 Reprint Year: 2024

About the Book: In this book an attempt has been made to present methods which are of use to phytopathologists. Many of the methods are useful in other botanical sciences also. An extensive bibliography has been included. Many of the papers cited describe techniques which have not been used by phytopathologists but which appear to be applicable in pathological work. This book presents newly discovered diseases and newly identified hosts in the classic format that has won favour with readers at every level of expertise and experience. Easy access to essential information and numerous illustrations help identify important diseases. This book of a long-trusted resource will serve a broad reader, from amateur backyard gardeners to landscape architects, arborists, florists, nursery professionals and plant scientists. As we all know that plant diseases is one of the most important topics as many books have been written in this topic. This modest effort is another pearl in the sequence. This book has been designed in mind the mentality of the general reader's language which is easy to understand.

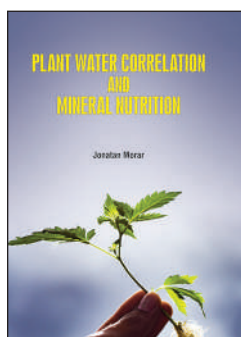


Plant Pathology: Diseases and Management

Orion Gaylord

ISBN: 9781799601005 HB Price: \$ 230.00 Size: 7 × 10 Pages: 294 Year: 2020 Reprint Year: 2024

About the Book: Plant Pathology is the scientific study of plant disease caused by pathogens (infectious diseases) and environmental conditions (physiological factors). Organisms that cause infectious disease include fungi, oomycetes, bacteria, viruses, viroids, virus-like organisms, phytoplasm, protozoa, nematodes and parasitic plants. Disease development and plant resistance working against disease development are not relatively better understood. Molecular plant pathology is providing appropriate diagnostic tools/techniques for identification of causal agents and introduction of resistance in plants. The goal of plant disease management is to reduce the economic and aesthetic damage caused by plant diseases. Traditionally, this has been called plant disease control, but current social and environmental values deem "control" as being absolute and the term too rigid. More multifaceted approaches to disease management, and integrated disease management, have resulted from this shift in attitude, however. Single, often severe, measures, such as pesticide applications, soil fumigation or burning are no longer in common use. Further, disease management procedures are frequently determined by disease forecasting or disease modeling rather than on either a calendar or prescription basis. Disease management might be viewed as proactive whereas disease control is reactive, although it is often difficult to distinguish between the two concepts, especially in the application of specific measures. This book has been formatted to cover several aspects of plant pathology to cater to the need of students.

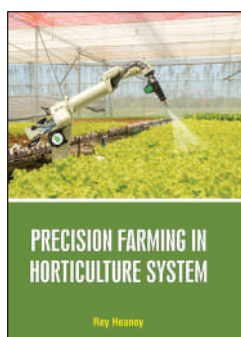


Plant Water Correlation and Mineral Nutrition

Jonatan Morar

ISBN: 9781799601036 HB Price: \$ 230.00 Size: 7 × 10 Pages: 328 Year: 2020 Reprint Year: 2024

About the Book: Knowledge of plant water relations is important because water is essential for both plants and animals. It serves as a medium for the dissolution of substances. A huge amount of water is taken up daily by plants and a considerable amount is lost in transpiration. The water requirement of different categories of plants is different. The plants absorb water and soluble mineral salts from the soil by their root system. This function of absorption is facilitated by the unicellular root hairs present on the roots. These unicellular root hairs enter in the interspaces of the soil particles, irregularly. These root hairs absorb the water found in the form of thin films around these soil particles. The relationship between plants and all chemical elements other than carbon, hydrogen, and oxygen in the environment. Plants obtain most of their mineral nutrients by extracting them from solution in the soil or the aquatic environment. Mineral nutrients are so called because most have been derived from the weathering of minerals of the Earth's crust. Nitrogen is exceptional in that little occurs in minerals: the primary source is gaseous nitrogen of the atmosphere. Absorption, utilization and assimilation of inorganic compound or minerals by plants for synthesis of essential material for their growth, development, structure and physiology is called Mineral Nutrition. The inorganic materials obtained from soil which are used as raw material by plants is called Mineral Nutrients. The book is suitable to establish a plant, water, mineral and quality control laboratory. The basic purpose is to help in making fertilizer recommendations for optimum yield potential.

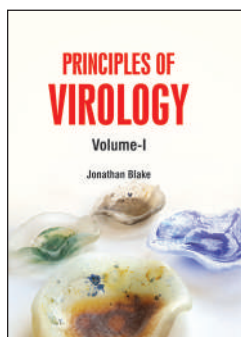


Precision Farming in Horticulture System

Rey Heaney

ISBN: 9781799600909 HB Price: \$ 230.00 Size: 7 × 10 Pages: 348 Year: 2020 Reprint Year: 2024

About the Book: Precision farming is defined as the cultivation by adopting technologies which give maximum precision in production of a superior crop with a desired yield levels and quality at competitive production. These include use of genetically modified crop varieties, micro propagation, integrated nutrient, water and pest managements, protected cultivation, organic farming, hi-tech horticulture, and post harvest technology. "Precision agriculture" or "precision farming" is the term applied to the several technologies involved in crop and field mapping by remote sensing to optimize the application of inputs to crops to increase efficiency, minimize waste of resources, and limit adverse environmental impact. Precision Farming is an emerging, important hi-tech approach to agricultural practices which promises to revolutionise the sector of agriculture. This new technology enables farmers to create finely detailed maps of farms that describe important characteristics, such as fertilizer requirements, by a specific location of the field. An information and technology based farm management system identifies, analyses and manages variability in fields by conducting crop production practices at the right place and time and in the right way, for optimum profitability, sustainability and protection of the land resource. This book presents up-to-date research, field studies and practical applications from around the world to help agricultural scientists, extension functionaries and farmers to work together to design an appropriate farming methodology enhancing productively, profitability and sustainability in agriculture for the developing countries like ours.

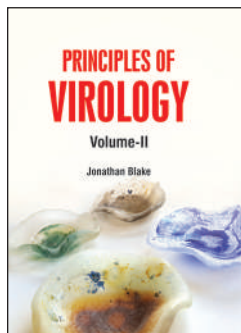


Principles of Virology (Vol. I)

Jonathan Blake

ISBN: 9781799601548 HB Price: \$ 230.00 Size: 7 × 10 Pages: 294 Year: 2020 Reprint Year: 2024

About the Book: Virology is the study of viruses and virus like agents: their structure, classification and evolution, their ways to infect and exploit cells for virus reproduction, the diseases they cause, the techniques to isolate and culture them, and their use in research and therapy. Virology is often considered a part of microbiology or of pathology. This book provides an in depth study of the properties of viruses, and their impact on bacteria, plants, animals and humans with the coverage of latest information on antiviral drugs and viral vaccines. This book serves as an indispensable tool to know in detail the major viral diseases, the mechanism of their transmission, prevention and control measures. Virology is a fascinating and rapidly developing subject, and is worthy of study purely because viruses are interesting. There is a continuous need for trained virologists, and it is hoped that his book will play a small role to fulfill this need. A major branch of virology is virus classification. Viruses can be classified according to the host cell they infect: animal viruses, plant viruses, fungal viruses, and bacteriophages (viruses infecting bacterium, which include the most complex viruses). Another classification uses the geometrical shape of their capsid (often a helix or an icosahedron) or the virus's structure (e.g. presence or absence of a lipid envelope). Viruses range in size from about 30 nm to about 450 nm, which means that most of them cannot be seen with light microscopes. The shape and structure of viruses has been studied by electron microscopy, NMR spectroscopy, and X-ray crystallography. This book provides the entire basic information required for the beginner of virology. The information provided will be useful to students of all disciplines of biology including agriculture, veterinary, pharmacy and medicine. It also fulfills the long-felt needs of researchers and teachers of all biological sciences.

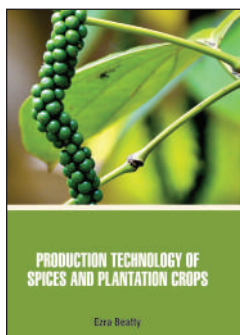


Principles of Virology (Vol. II)

Jonathan Blake

ISBN: 9781799601562 HB Price: \$ 230.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: Virology is the study of viruses and virus like agents: their structure, classification and evolution, their ways to infect and exploit cells for virus reproduction, the diseases they cause, the techniques to isolate and culture them, and their use in research and therapy. Virology is often considered a part of microbiology or of pathology. This book provides an in depth study of the properties of viruses, and their impact on bacteria, plants, animals and humans with the coverage of latest information on antiviral drugs and viral vaccines. This book serves as an indispensable tool to know in detail the major viral diseases, the mechanism of their transmission, prevention and control measures. Virology is a fascinating and rapidly developing subject, and is worthy of study purely because viruses are interesting. There is a continuous need for trained virologists, and it is hoped that his book will play a small role to fulfill this need. A major branch of virology is virus classification. Viruses can be classified according to the host cell they infect: animal viruses, plant viruses, fungal viruses, and bacteriophages (viruses infecting bacterium, which include the most complex viruses). Another classification uses the geometrical shape of their capsid (often a helix or an icosahedron) or the virus's structure (e.g. presence or absence of a lipid envelope). Viruses range in size from about 30 nm to about 450 nm, which means that most of them cannot be seen with light microscopes. The shape and structure of viruses has been studied by electron microscopy, NMR spectroscopy, and X-ray crystallography. This book provides the entire basic information required for the beginner of virology. The information provided will be useful to students of all disciplines of biology including agriculture, veterinary, pharmacy and medicine. It also fulfills the long-felt needs of researchers and teachers of all biological sciences.

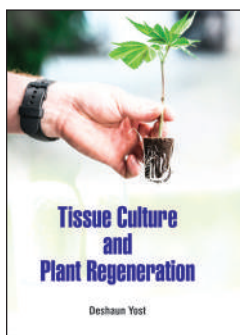


Production Technology of Spices and Plantation Crops

Ezra Beatty

ISBN: 9781799601043 HB Price: \$ 230.00 Size: 7 × 10 Pages: 330 Year: 2020 Reprint Year: 2024

About the Book: In recent years, there has been a tremendous growth of interest in plant-based drugs, pharmaceuticals, perfumery products, cosmetics and aromatic compounds used in food flavors, fragrances, and natural colors. This book is a single hand source book which deals with all aspects and facts of Spices, Plantation Crops, Medicinal and Aromatic Plants which may meet the requirements of all those who are pursuing their interest in any fields related to spices, medicinal plants, aromatic plants etc. A book written simple and understandable English on low volume, high crops does not only carries information theoretically but practically also and will be a boon for students, researchers, extension workers and commercial growers.

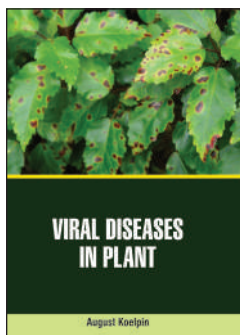


Tissue Culture and Plant Regeneration

Deshaun Yost

ISBN: 9781799600053 HB Price: \$ 195.00 Size: 7 × 10 Pages: 322 Year: 2020 Reprint Year: 2024

About the Book: "The term 'Tissue culture' can be applied to any multicellular culture growing on a solid medium that consists of many cells in protoplasmic continuity. The culture of an explant, consisting of one or more tissue, results in a callus that has no structural or functional counterpart with any tissue of the normal plant body. Tissue culture, a method of biological research in which fragments of tissue from an animal or plant are transferred to an artificial environment in which they can continue to survive and function. Regeneration of plants from cultured cells has many other applications. Plant regeneration from cultured cells is proving to be a rich source of genetic variability, called "somaclonal variation". Several somaclones have been processed into new cultivars. Regeneration of plants from microspore/pollen provides the most reliable and rapid method to produce haploids, which are extremely valuable in plant breeding and genetics. Plant regeneration is the major outcome of plant tissue culture, which is based on the principle of totipotency. Plant regeneration can be achieved by organogenesis and somatic embryogenesis. Organogenesis means formation of organs from the cultured explants. This book is aimed at all those interested and involved in the results of plants on the environment and is an essential basic reference book for students, academicians and specialists.



Viral Diseases in Plant

August Koelpin

ISBN: 9781799601067 HB Price: \$ 230.00 Size: 7 × 10 Pages: 316 Year: 2020 Reprint Year: 2024

About the Book: Plant virus is any of a number of agents that can cause plant disease. Plant viruses are of considerable economic importance because many of them infect crop and ornamental plants. Numerous plant viruses are rodlike and can be extracted readily from plant tissue and crystallized. The majority of them lack the fatty membrane found in many animal viruses, and all contain ribonucleic acid (RNA). This textbook on viral diseases of plants deals with a discussion of different plant viruses, their properties, and the corresponding diseases these viruses cause. It contains separate chapters on properties of plant viruses with symptoms, composition, morphology, nomenclature and modern classification, along with description of different viruses. It includes a list of host plants of every virus. It also discusses the development of new techniques that is used to characterize in detail the causal viruses of a number of plant virus diseases. Furthermore, it presents the plant virus serology, as well as the improved methods of virus isolation that allow the classification of viruses into related groups. This book will be invaluable to ecologists, environmentalists, agriculturalists, and other scientists interested in plant viruses. Biology students will also find this reference helpful.

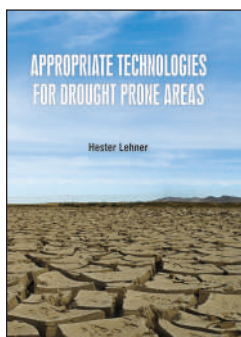


Applications of forest Biotechnology

Bruce Heller

ISBN: 9781799600770 HB Price: \$ 230.00 Size: 7 × 10 Pages: 280 Year: 2020 Reprint Year: 2024

About the Book: Biotechnological innovation in forestry falls into three main areas: the use of vegetative reproduction methods; the use of genetic markers; and the production of genetically modified organisms (GMOs), or transgenic trees. Most of the biotechnologies used in forestry today involve vegetative reproduction through tissue culture and molecular marker applications. The benefits of biotechnology in forestry go beyond economic advantages-including increased production, lower costs to consumers, and trees modified for easy processing or specific production values-to such environmental benefits as helping to preserve biodiversity and mitigate global warming. Biotechnology, or more specifically the employment of biological agents, such as fungi, bacteria and more exclusively extracellular enzymes offers a wide range of potential applications, and consequently benefits for the forest products industry. Biotechnological manipulations have been shown to complement and/or enhance conventional wood processing operations, such as pulp and paper manufacture and paper recycling, and may provide many economic and environmental benefits through waste reduction, energy savings and reductions in toxic chemicals released into the environment. This book presents a comprehensive review of special research directed towards efficient and environmentally sensitive use of forests.

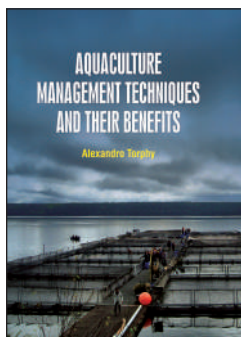


Appropriate Technologies for Drought Prone Areas

Hester Lehner

ISBN: 9781684699650 HB Price: \$ 200.00 Size: 7 × 10 Pages: 308 Year: 2020 Reprint Year: 2024

About the Book: Droughts are the worst crisis in some drought prone rainfed and dryland areas in this world. The crisis is so serious on humans as well as livestock animals that if mitigatory measures with appropriate technologies are not taken in time the prolonged drought situation would become devastatingly unique with loss of humans and livestock animals. The terrible shortage of drinking water and life saving irrigation to the field crops particularly in the hottest period of the season become the menace both for flora and fauna. This book entitled Appropriate Technologies for Drought Prone Areas has got tremendous impact on the socio economic upliftment of the resource poor farming community as well as generating income for the ultimate benefits of the clientele group. The author has been prompted to write this book as a practical reference document and has tried to mark the situation of droughts its brief survey managing droughts with experience from past droughts dryland agriculture.

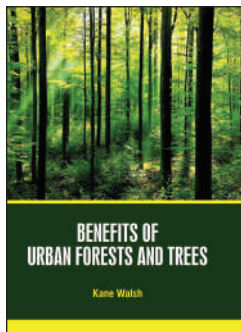


Aquaculture Management Techniques and Their Benefits

Alexandro Torphy

ISBN: 9781684699667 HB Price: \$ 185.00 Size: 7 × 10 Pages: 298 Year: 2020 Reprint Year: 2024

About the Book: Although some nations have invested in aquaculture research and developed major aquaculture industries, the opportunities for similar development in the United States remain largely unnoticed. Next to oil, fishery products constituted the second highest drain on the United States balance of payments and accounts for a significant portion of the foreign trade deficit. In response to the demand for fishery products, aquaculture managers not only have the opportunity to realize economic profit, but in doing so can make an important contribution to reducing the national debt, providing employment, and enhancing our diet. This book might be considered a farm management text for those in aquaculture. It is intended to provide an introduction to aquaculture principles and an introduction to management. We hope it will bridge the gap between conservationists, the academic community, and commercial culturists.



Benefits of Urban Forests and Trees

Kane Walsh

ISBN: 9781799600787 HB Price: \$ 225.00 Size: 7 × 10 Pages: 290 Year: 2020 Reprint Year: 2024

About the Book: Urban forestry is the art and science of managing the biotic components in cities for the health and well-being of people. As people move to urban centers, they become increasingly disconnected from the natural and agricultural systems known to their ancestors. Large urban trees are excellent filters for urban pollutants and fine particulates. Trees can provide food, such as fruits, nuts and leaves. Spending time near trees improves physical and mental health by increasing energy level and speed of recovery, while decreasing blood pressure and stress. Trees properly placed around buildings can reduce air conditioning needs by 30% and save energy used for heating by 20-50%. Trees provide habitat, food and protection to plants and animals, increasing urban biodiversity planting trees today is essential for future generations! Their benefits and uses range from intangible psychological and aesthetic benefits to amelioration of urban climate and mitigation of air pollution. Historically the main benefits of urban trees and forests relate to health, aesthetic and recreational benefits in industrialized cities. This book brings a perspective of political ecology to the complexities of urban trees and forests through three themes: human agency in urban forests and greenspace; arboreal and greenspace agency in the urban landscape; and actions and interventions in the urban forest.

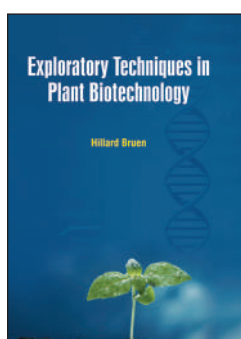


Environmental Microbiology and Biotechnology

Dan Mosciski

ISBN: 9781799600596 HB Price: \$ 195.00 Size: 7 × 10 Pages: 344 Year: 2020 Reprint Year: 2024

About the Book: Environmental microbiology and biotechnology are crucial in the modern society. They influence human health, environment and serve as a source of energy and provider of novel bioproducts. The key areas of interest are bioremediation, microbial communities, pathogen detection, wastewater treatment, energy generation, bioprocesses, and natural product discovery. Environmental microbiology must interact with hydrology, biogeochemistry, limnology, oceanography and numerical modeling. Environmental biotechnology is a stream in science which deals with microorganisms for environmental improvements. Wastewater treatment is the process of converting wastewater – water that is no longer needed or is no longer suitable for use – into bilge water that can be discharged back into the environment. It's formed by a number of activities including bathing, washing, using the toilet, and rainwater runoff. Wastewater is full of contaminants including bacteria, chemicals and other toxins. Its treatment aims at reducing the contaminants to acceptable levels to make the water safe for discharge back into the environment. This book provides general information in the area of Environmental Science, Microbiology and Biotechnology. Keeping in view the recent advances in these disciplines, this book aims to focus on the application of Microbiology and Biotechnology in tackling the environmental issues.

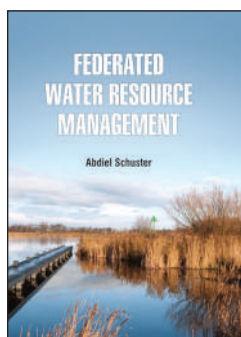


Exploratory Techniques in Plant Biotechnology

Hillard Bruen

ISBN: 9781799600183 HB Price: \$ 195.00 Size: 7 × 10 Pages: 346 Year: 2020 Reprint Year: 2024

About the Book: Plant biotechnology may be characterized as the utilization of learning got from investigation of the life sciences to make innovative changes in plant species and the Totipotency and agriculture to which the act of greenhouse development and administration and the capacity of cells, for example, an embryonic undifferentiated cell to separate into a body cell. In practice, biotechnology is often combined with plant breeding to develop plants. In this context, genetic markers mapped near genes responsible for important agricultural features are used to select the desired plant. New age molecular techniques can be easily adapted for plant system. Molecular farming has the potential to provide unlimited quantities of recombinant proteins and, thus, represents a powerful alternative to conventional protein production systems. Tissue culture techniques are part of a large group of strategies and technologies, ranging through molecular genetics, recombinant DNA studies, genome characterization, gene transfer techniques, aseptic growth of cells, tissues, organs, and in vitro regeneration of plants, that are considered to be plant biotechnologies. This book covers all important aspects of practical utility in field of genetic manipulation by tissue culture methods, protoplast technology and gene transfer methods for providing the students simple and reproducible protocols so that the practical utility in different areas of biotechnology should be fulfilled.



Federated Water Resources Management

Abdiel Schuster

ISBN: 9781799600657 HB Price: \$ 225.00 Size: 7 × 10 Pages: 334 Year: 2020 Reprint Year: 2024

About the Book: The world's water resources are being tapped at an ever increasing rate, to the extent that sustainability and water quality are being compromised. Water Resource Management presents the most intractable challenge for planners and policymakers. Considering the finite nature, increasing demand and deteriorating quality of freshwater, the need to protect and manage this resource properly is crucial. To succeed in the face of this biggest threat to human health and environmental degradation, an integrated approach to freshwater and waste water management is required, which involves innovative and region-specific pathways along with community participation. As time advances, water is becoming scarcer and having access to clean, safe, drinking water is limited among countries. At present only about 0.08 percent of all the world's fresh water is exploited by mankind in ever increasing demand for sanitation, drinking, manufacturing, leisure and agriculture. Due to the small percentage of water remaining, optimizing the fresh water we have left from natural resources has been a continuous difficulty in several locations worldwide. This book provides accounts of the technology used for managing water resources to reduce risks. Besides controlling floods, overcoming droughts and reducing pollution, the reader will learn to plan and maintain hydraulic structures, and to appreciate the diverse demands on water, including those of the environment.

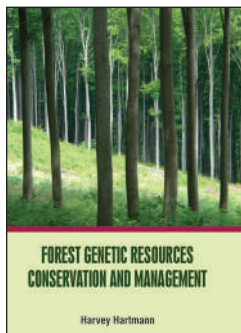


Forest Biodiversity and its Conservation Practices

Ezra Altenwerth

ISBN: 9781799600794 HB Price: \$ 225.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: Common practice with regard to additionality is well proven; there is no indication of comparable conservation acquisitions in the region surrounding the project that provide material revenues from conservation without carbon finance, indeed this is unique in comparison to other conservation activities. Biodiversity provide the direct and indirect benefits to humans including food or material goods, environmental regulate, reduced carbon emissions and reduces climate change. The main objective of biodiversity conservation is to use the resource sustainably. Intact forests can provide cost-effective "insurance" against the impacts of climate change. For example, nature can defend coastal communities against the effects of storms and natural disasters if coastal ecosystems are intact. Compared to hard infrastructure such as seawalls and levees, restoring mangrove forests is much more affordable for protecting large coastal areas and requires less maintenance. Additional benefits include providing communities with food, raw materials and livelihoods as well as other benefits from biodiversity. The book will generate interest in conservation and utilization of forest genetic resources of India and Developing Countries among scientists, foresters, researchers, environmentalists and conservationists.

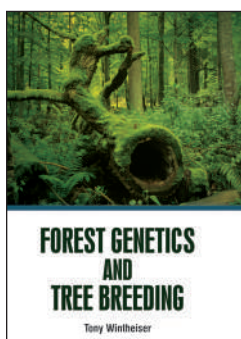


Forest Genetic Resources Conservation and Management

Harvey Hartmann

ISBN: 9781799600800 HB Price: \$ 225.00 Size: 7 × 10 Pages: 284 Year: 2020 Reprint Year: 2024

About the Book: Forest genetic resources are the heritable materials within and among tree species and other woody plants. Forest genetic resources underpin the adaptive potential that has enabled trees to be, in evolutionary terms, among the planet's most successful types of organism. The practice of genetic conservation is not intended to conserve every genetic variant (or "genotype") – indeed, this would be impossible because individuals of sexually reproducing species are genetically unique. Rather, the aim is to conserve the evolutionary potential of species, which means ensuring the continuation and functioning of the processes that shape and maintain genetic diversity. It allows trees and shrubs to react against changes in the environment, including those brought about by pests, diseases and climatic change. It provides the building blocks for future evolution, selection and human use in breeding for a wide range of sites and uses. And, at different levels, it supports the aesthetic, ethical and spiritual values of humans. Forest resources conservation and management contains selected papers of renowned professors, academicians, researchers and scientists of different parts of India and abroad linked with various issues and dimensions of forest resources and its conservation and management. This book is expected to benefit the researchers, general readers and policy makers for policy implication.

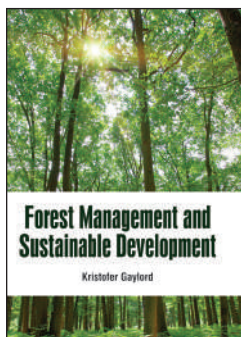


Forest Genetics and Tree Breeding

Tony Wintheiser

ISBN: 9781799600817 HB Price: \$ 225.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Forestry sector is considered one of the most developed in the world, being the base for important industrial segments which use wood as raw material. Tree breeding has played an important role on improving the competitiveness of forestry-based companies, especially for its positive reflexes on increasing adaptation, forestry productivity and wood quality. Forest trees meet human needs and contribute to natural ecosystems in unique and diverse ways. As a source of fuel and fiber, they are important commodities. As dominant members of many natural ecosystems, they play keystone ecological roles in plant and animal communities. As habitat for other organisms, forests are a reservoir of great natural diversity. Sufficient genetic diversity ensures the success of our forest tree species in a highly variable environment. Safeguarding genetic diversity and resources is an important part of biodiversity conservation and a goal to which Finland has committed through international conventions. Genetic diversity refers to the variability between specimens within a species. The present book has been designed as a text-cum-reference book for post-graduate students, research workers, teachers and undergraduate students specializing in advance course of forest genetics and tree improvement. It is believed, the book will immensely benefit them all.

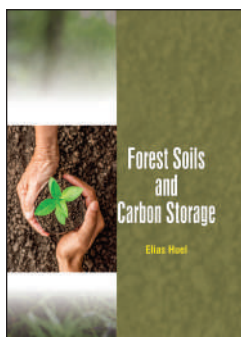


Forest Management and Sustainable Development

Kristofer Gaylord

ISBN: 9781799600824 HB Price: \$ 225.00 Size: 7 × 10 Pages: 326 Year: 2020 Reprint Year: 2024

About the Book: Forest management for sustainable development has raised several issues, both environmental and economic nature. Ancient Indian economic thinking had always championed the cause of ecological balance and judicious forest management for social welfare. Forests have a significant role in reducing the risk of natural disasters, including floods, droughts, landslides and other extreme events. At global level, forests mitigate climate change through carbon sequestration, contribute to the balance of oxygen, carbon dioxide and humidity in the air and protect watersheds, which supply 75% of freshwater worldwide. Also lacking is economic knowledge about the total value of benefits derived from forests and about ways to evaluate tradeoffs among various goods and services. Sustainable forest management, also known as sustainable forestry, is the practice of regulating forest resources to meet the needs of society and industry while preserving the forest's health. Therefore, sustainable forest management is always looking to strike a balance between the demand for the forest's natural resources and the vitality of the forest. The book is on country-specific and regional studies on sustainable forest management.

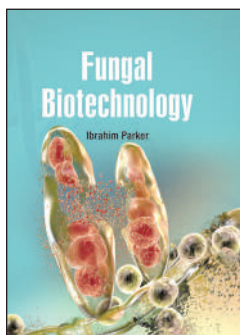


Forest Soils and Carbon Storage

Elias Huel

ISBN: 9781799600831 HB Price: \$ 225.00 Size: 7 × 10 Pages: 316 Year: 2020 Reprint Year: 2024

About the Book: Forests play a key role in the carbon cycle as they store huge quantities of organic carbon, most of which is stored in soils, with a smaller part being held in vegetation. While the carbon storage capacity of forests is influenced by forestry, the long-term impacts of forest managers' decisions on soil organic carbon (SOC) remain unclear. Using a meta-analysis approach, we showed that conventional biomass harvests preserved the SOC of forests, unlike intensive harvests where logging residues were harvested to produce fuelwood. Soils in equilibrium with a natural forest ecosystem have high carbon (C) density. The ratio of soil: vegetation C density increases with latitude. Land use change, particularly conversion to agricultural ecosystems, depletes the soil C stock. Thus, degraded agricultural soils have lower soil organic carbon (SOC) stock than their potential capacity. Forest has an enormous potential in mitigating climate change through forest restoration. Trees and other vegetation fix carbon as part of photosynthesis and soil too holds organic carbon from plants and animals. The amount of soil carbon varies with land management practices, farming methods, soil nutrition and temperature. Any consideration of forest carbon storage must include soils. In temperate forest ecosystems, the amount of carbon stored in soils is often greater than the amount stored aboveground in living and dead plant biomass. Although the relative amounts of organic carbon in plant and soil components vary by climate and region belowground carbon is a substantial carbon pool. Soil Processes and the Carbon Cycle describes soil processes and their effects on the global carbon cycle while relating soil properties to soil quality and potential and actual carbon reserves in the soil. In addition, this book deals with modeling the carbon cycle in soil, and with methods of soil carbon determinations.

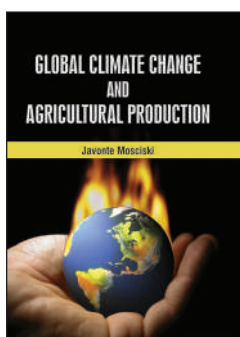


Fungal Biotechnology

Ibrahim Parker

ISBN: 9781799600190 HB Price: \$ 195.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: Fungal Biotechnology is an important publication representing these advances and multiple roles played by fungi. This includes mostly industrial applications of fungi for the production of pigments, citric acid and vitamins, beneficial effects of mycorrhizal fungi, mycoviruses, biotransformation, and also various health implications. All aspects of cultivating fungi together with products and processes derived from such cultures. Fungi exhibit a wide range of biosynthetic and biodegradative activities. These species impact us in diverse ways, such as generating the food we eat and drink, providing life-saving pharmaceutical agents, and are sources of enzymes; and yet they adversely affect the structural integrity of our buildings, poison us, cause common mycoses and in not so rare cases can kill us, and they are the principal group of microbes responsible for plant diseases that threaten global food security. The present book provides information about contemporary biological research and will give a sense of the importance of plants in world. This book would be very useful for researchers, teachers and students studying mycology.

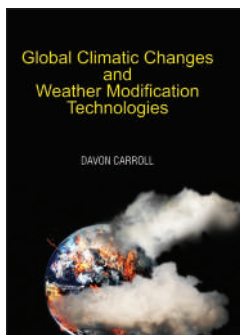


Global Climate Change and Agricultural Production

Javonte Mosciski

ISBN: 9781799600619 HB Price: \$ 205.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Global climate change explains very briefly what has been happening to the world's climate and why and what is projected to happen in the future. Climate change refers to the variation in the earth's global climate or in regional climates over time. It describes changes in the variability or average state of the atmosphere over time scales ranging from decades to millions of years. Climate change is likely to contribute substantially to food insecurity in the future, by increasing food prices, and reducing food production. Food may become more expensive as climate change mitigation efforts increase energy prices. Interest in this issue has motivated a substantial body of research on climate change and agriculture over the past decade. Climatic conditions are of extraordinary importance for the existence of mankind, and the risks of climate change have long been recognised. Today, human activity is altering entire global systems, such as the atmosphere and the oceans, at an unprecedented rate. This book is intended to serve as a comprehensive resource for understanding global climate change, and its potential impacts on global ecosystem and its inhabitants. It is hoped that this book will encourage closer links and shared understanding among different academic disciplines so that they might work together more effectively to address the common problem of global change.

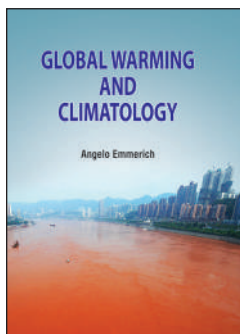


Global Climatic Changes and Weather Modification Technologies

Davon Carroll

ISBN: 9781799600626 HB Price: \$ 195.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: Weather Modification (Cloud Seeding) is a technology, which helps in disaster management. The technology of weather modification is being developed in different countries. Global warming due to increased concentrations of greenhouse gases, if it occurs, will be the most significant change in weather and climate ever produced by human beings. One can speculate about the possibility of offsetting this inadvertent, long-term weather modification by deliberately modifying the weather through cloud seeding. The most common form of weather modification is cloud seeding, which increases rain or snow, usually for the purpose of increasing the local water supply. Weather modification can also have the goal of preventing damaging weather, such as hail or hurricanes, from occurring; or of provoking damaging weather against the enemy, as a tactic of military or economic warfare like Operation Popeye, where clouds were seeded to prolong the monsoon in Vietnam. Weather modification in warfare has been banned by the United Nations under Environmental Modification Convention. While we are to be modest, it is brought to the notice of the reader that this book attempts to provide as wide coverage of the topics related to cloud seeding. The extent of coverage of each topic varies depending upon the state of art of the development.

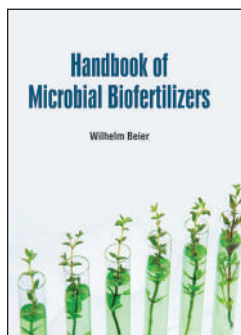


Global Warming and Climatology

Angelo Emmerich

ISBN: 9781799600633 HB Price: \$ 225.00 Size: 7 × 10 Pages: 302 Year: 2020 Reprint Year: 2024

About the Book: Global Warming is the increase in Earth's mean surface temperature because of the effect of greenhouse gases. These gases absorb long wave radiations and warm the atmosphere, and this process is called as Greenhouse effect. It had led to many changes on the planet, such as rise in sea level; massive melting of snow and land ice, elevated heat content of the oceans, increased humidity, change in the timings of seasonal events, and many others. Climate is an active factor in the physical environment of all living things. Its influences on human welfare range from the immediate effects of weather events to complex responses associated with climatic change. Climate change encompasses not only rising average temperatures but also extreme weather events, shifting wildlife populations and habitats, rising seas, and a range of other impacts. All of those changes are emerging as humans continue to add heat-trapping greenhouse gases to the atmosphere, changing the rhythms of climate that all living things have come to rely on. Global warming and climate change are much debated terms these days which have attracted the inclination of scientists, governments, NGOs and common people all over the world. The present book is an attempt in the direction of bringing together all necessary information on global warming and climate change.

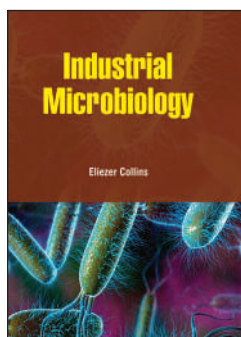


Handbook of Microbial Biofertilizers

Wilhelm Beier

ISBN: 9781684699902 HB Price: \$ 185.00 Size: 7 × 10 Pages: 334 Year: 2020 Reprint Year: 2024

About the Book: Biofertilizers are the substance that contains microorganism's living or latent cells. Biofertilizers increases the nutrients of host plants when applied to their seeds, plant surface or soil by colonizing the rhizosphere of the plant. Biofertilizers are more cost-effective as compared to chemical fertilizers. The Handbook of Microbial Biofertilizers provides in-depth coverage of all major microbial biofertilizers. It examines the role of microbes in growth promotion, bioprotectors, and bioremediators, and presents protocols and practical strategies for using microbes in sustainable agriculture. An abundance of helpful charts, tables, and figures make complex information easy to access and understand. The Handbook of Microbial Biofertilizers is designed to fit the expanding information needs of current and future biotechnologists, microbiologists, botanists, agronomists, environmentalists, and others whose work involves sustained agriculture.

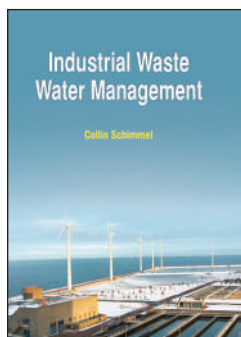


Industrial Microbiology

Eliezer Collins

ISBN: 9781799600213 HB Price: \$ 195.00 Size: 7 × 10 Pages: 334 Year: 2020 Reprint Year: 2024

About the Book: Industrial microbiology is a branch of applied microbiology in which microorganisms are used in industrial processes; for example, in the production of high-value products such as drugs, chemicals, fuels and electricity. Industrial Microbiology provides a structured approach to learning by covering all the important topics in a simple, uniform and systematic format. Areas of industrial microbiology include discovery of new organisms and pathways, such as antimicrobial drugs. For instance, most antibiotics come from microbial fermentations involving a group of organisms called actinomycetes. Other organisms such as yeasts are used in baking, in the production of alcoholic beverages, and in biofuel production. Additional groups of microorganisms form products that range from organic acids to enzymes used to create various sugars, amino acids, detergents, and consumer products/specialty ingredients. For example, the sweetener aspartame is derived from microbially produced amino acids. Industrial microbiologists may also be responsible for the bioremediation of air, soil and water contamination. Industrial microbiology includes the use of microorganisms to manufacture food or industrial products in large quantities. Numerous microorganisms are used within industrial microbiology; these include naturally occurring organisms, laboratory selected mutants, or even genetically modified organisms (GMOs). Currently, the debate in the use of genetically modified organisms (GMOs) in food sources is gaining both momentum, with more and more supporters on both sides. However, the use of microorganisms at an industrial level is deeply rooted into today's society. The following is a brief overview of the various microorganisms that have industrial uses, and of the roles they play. Archaea are specific types of prokaryotic microbes that exhibit the ability to sustain populations in unusual and typically harsh environments. In effect, the book analyses how microbiological progress have made an impact in industrial processes and the developments currently it also looks into the future of the field, exploring what needs to be done, and the contemporary processes in the field.



Industrial Waste Water Management

Collin Schimmel

ISBN: 9781799600640 HB Price: \$ 225.00 Size: 7 × 10 Pages: 338 Year: 2020 Reprint Year: 2024

About the Book: Industrial wastewater treatment describes the processes used for treating wastewater that is produced by industries as an undesirable by-product. After treatment, the treated industrial wastewater (or effluent) may be reused or released to a sanitary sewer or to a surface water in the environment. Industrial applications where oil enters the wastewater stream may include vehicle wash bays, workshops, fuel storage depots, transport hubs and power generation. Often the wastewater is discharged into local sewer or trade waste systems and must meet local environmental specifications. Typical contaminants can include solvents, detergents, grit, lubricants and hydrocarbons. Industrial wastewater treatment covers the mechanisms and processes used to treat waters that have been contaminated in some way by anthropogenic industrial or commercial activities prior to its release into the environment or its re-use. Most industries produce some wet waste although recent trends in the developed world have been to minimise such production or recycle such waste within the production process. However, many industries remain dependent on processes that produce wastewaters. Industrial wastewater is generated as a consequence of industrial activities. Industrial wastewater is generated as a result of industrial activity. There is a wide range of types of industrial wastewater (e.g. from processes, cleaning and cooling), with different types of pollutants. Most industrial processes use water in one way or another. Once used, the water has to be treated before being disposed of, regardless of whether it is returned to the natural environment or into the sewage network. This book should prove extremely useful to undergraduate students of civil and chemical engineering and postgraduate students of environmental science and engineering. Industrial design consultants will also find the book very handy.

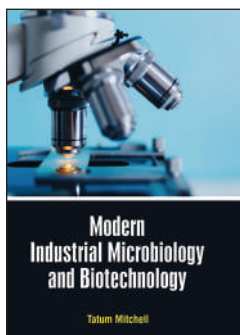


Integrated Pest Management: A Novel Approach for Forest Pest Control

Jimmy Kunde

ISBN: 9781799600848 HB Price: \$ 230.00 Size: 7 × 10 Pages: 322 Year: 2020 Reprint Year: 2024

About the Book: In this book, novel approaches to integrated pest management (IPM) are compiled not only to demonstrate in detail the remarkable achievements and contributions of this field to the environment, public health and the world economy, but also to draw prospects for the future of each related field of IPM. Integrated pest management (IPM) refers to strategies used to minimize the application of chemical pesticides and to combat plant pests, such as insects and other arthropods, pathogens, nematodes, weeds, and certain vertebrates, without incurring economic plant damage. All plant pests (as well as other life forms) have natural enemies, and the use of such biological control agents is commonly thought to form the basis of IPM. Biological control can be practiced through the introduction, encouragement, and/or release in high numbers of appropriate natural enemies of plant pests. However, in many cases, particularly those involving pests other than insects, biological control may be insufficient to provide economic management of pests on crops or other plants valued by humans. IPM is a tactics pest management including monitoring of insect populations, cultural, mechanical, biological and chemical methods of insect pest's management. In all several IPM tactics there is biological pests control are useful technique that discourage the development of populations of harmful organisms. The book will be useful for the researchers working in the fields of agriculture, microbiology, entomology, pathology, nematology, ecology, botany, zoology and forestry.

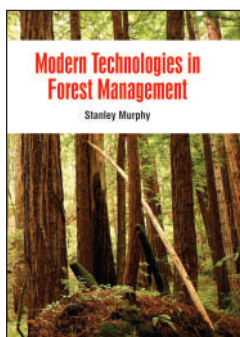


Modern Industrial Microbiology and Biotechnology

Tatum Mitchell

ISBN: 9781799600244 HB Price: \$ 195.00 Size: 7 × 10 Pages: 346 Year: 2020 Reprint Year: 2024

About the Book: Industrial microbiology is primarily associated with the commercial exploitation of microorganisms, and involves processes and products that are of major economic, environmental and gregarious consequentiality throughout the world. Microbiology is a basic subject which is a sub section of biology. It deals with the life cycles and behaviour of microbes (bacteria/fungi etc.). Biotechnology is a wider subject and covers most of the microbiology in it. Some easily understandable examples from biotech are mutation, breeding and cloning. Bioprocess technology is an extension of ancient techniques for developing useful pro-ducts by taking advantage of natural biological activities such as production of enzymes (used, for example, in food processing and waste management) and antibiotics. Use of living material offers several advantages over con-ventional chemical methods of production. This book is directed towards undergraduates and beginning graduate students in microbiology, food science and chemical engineering. Those studying pharmacy, biochemistry and general biology will find it of interest. The field of industrial microbiology involves a thorough knowledge of the microbial physiology behind the processes in the large-scale, profit-oriented production of microbe-related goods which are the subject of the field.

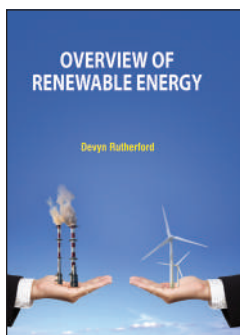


Modern Technologies in Forest Management

Stanley Murphy

ISBN: 9781799600855 HB Price: \$ 225.00 Size: 7 × 10 Pages: 290 Year: 2020 Reprint Year: 2024

About the Book: Forest Management is concerned with conservation and management of wildlife, wood commodities, forest genetic resources and preservation of other forest values while complying with the legal, economic, social, technical and scientific factors governing the protection and regulation of forests. Forest management is the process of planning and implementing practices for the stewardship and use of forests and other wooded land to meet specific environmental, economic, social and cultural objectives. It deals with the overall administrative, economic, legal, social, technical and scientific aspects related to natural and planted forests. In a new management style known most commonly as new forestry, 85–90% of trees on a site are harvested, and the land is left alone for decades to recover. Proponents say this method would cut down on erosion and increase diversity left behind on a tract, especially where one or two species dominate. The Forest Service and some Northwest states are studying new forestry, but environmentalists say too little is known about its effects on old-growth stands to use the practice. Timber companies say more and larger tracts would have to be harvested under new forestry to meet demand. This book provides a focused understanding of contemporary forest management issues through real life examples to engage students.

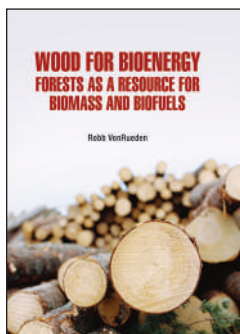


Overview of Renewable Energy Technologies

Devyn Rutherford

ISBN: 9781799600664 HB Price: \$ 225.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Renewable energy uses natural resources such as sunlight, wind, tides and geothermal heat which are naturally replenished. Most forms of renewable energy are cheap to operate, but relatively expensive to install, as they have to take quite dispersed energy and concentrate it into a useful form. The heat from solar energy can be captured by solar thermal panels. These panels absorb the energy from the sun and transfer it to heat water. Solar water heating systems are the most popular form of solar energy used in the UK. Plentiful and inexhaustible in the United States and around the world, wind power is one of the fastest growing renewable technologies and has the potential to provide a significant portion of our electricity needs. Heat from the earth can be used as an energy source in many ways, from large and complex power stations to small and relatively simple residential pumping systems. Renewable energy technologies enable us to create electricity, heat and fuel from renewable sources. The book covers the wide spectrum of solar radiation, elements of heat transfer, solar collectors and application of solar collectors. It contains chapter on energy from biomass and biogas digesters, photovoltaic generation of electricity and its applications and wind energy besides impact of energy production and use on environment.

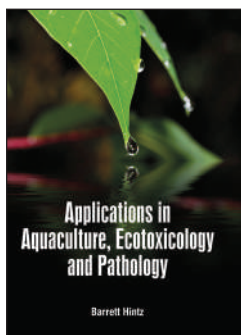


Wood for Bioenergy: Forests as a Resource for Biomass and Biofuels

Robb Vonrueden

ISBN: 9781799600862 HB Price: \$ 225.00 Size: 7 × 10 Pages: 306 Year: 2020 Reprint Year: 2024

About the Book: Wood (also known as woody biomass) is a traditional solid biofuel. It has been used for heating and cooking for thousands of years. Bioenergy is renewable energy made available from materials derived from biological sources. Today, as much of the world seeks to reduce dependence on fossil fuels, energy companies and nations alike are turning once again to our oldest renewable energy resource-wood. But using wood for bioenergy and biofuels is not without its issues. Of primary concern is if the wood needed for those purposes can be secured on a sustainable basis. Biomass can be used to produce renewable electricity, thermal energy, or transportation fuels (biofuels). Biomass is defined as living or recently dead organisms and any byproducts of those organisms, plant or animal. The term is generally understood to exclude coal, oil, and other fossilized remnants of organisms, as well as soils. In this strict sense, biomass encompasses all living things. In the context of biomass energy, however, the term refers to those crops, residues, and other biological materials that can be used as a substitute for fossil fuels in the production of energy and other products. Biomass obtained from agricultural residues or forest can be used to produce different materials and bioenergy required in a modern society. As compared to other resources available, biomass is one of the most common and widespread resources in the world. Thus, biomass has the potential to provide a renewable energy source, both locally and across large areas of the world. The book consists of three sections, presenting Non wood and forest products from forestry, arboriculture activities or from wood processing, agricultural biomass (natural fibers) from agricultural harvesting or processing and finally energy crops: high yield crops and grasses grown especially for energy production.

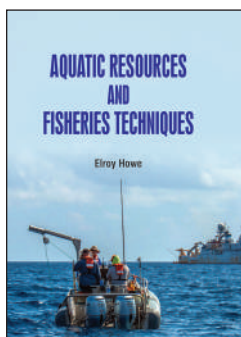


Applications in Aquaculture, Ecotoxicology and Pathology

Barrett Hintz

ISBN: 9781799601258 HB Price: \$ 230.00 Size: 7 × 10 Pages: 332 Year: 2020 Reprint Year: 2024

About the Book: Aquaculture also known as aqua-farming, is the farming of fish, crustaceans, molluscs, aquatic plants, algae, and other organisms. It is increasingly important in global food production. Consequently, the control of diseases in aquaculture is essential, due to the potential environmental impacts, notably in terms of the states of health of freshwater bodies and the oceans. This book highlights the latest advances in ecotoxicology, pathology and applications in aquaculture studies. This book explains the possible uses of different management systems and novel nano-technological strategies, for the control of diseases in aquaculture. It is the definitive, classic and essential book on the subject, providing in-depth coverage across all major aspects of aquaculture. The book provides comprehensive details of the principles, applications, nutrition and diseases of this field. Beautifully illustrated in figures and with exceptional photographs, it is an essential purchase for aquaculture pathologists, veterinarians, biologists, microbiologists and immunologists, including all those working in diagnostic services worldwide. Personnel working in aquaculture farming and fisheries will also find much of great use and interest. All libraries in universities and research establishments where biological and veterinary sciences are studied and taught should have copies of this landmark publication on their shelves.

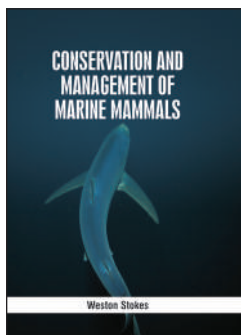


Aquatic Resources and Fisheries Techniques

Elroy Howe

ISBN: 9781684699674 HB Price: \$ 230.00 Size: 7 × 10 Pages: 314 Year: 2020 Reprint Year: 2024

About the Book: Commercial fishes found have been discovered over several thousand years ago. They are found in water ways such as, stream, lakes, rivers lagoon and even the sea. In the book, Aquatic Resources and Fisheries Techniques, the aquatic resources, directly or indirectly useful to man has been dealt, with special reference to fish, crustaceans and sea weeds, consumed directly by the mankind. Besides, describing the ancient methods of capture of these aquatic animals and the gradual evolution of fishing methods and gears the biotic communities with respect to their habitat, mode of life and migration pattern, the principles and operation of today s fishing gears and methods have been outlined in details in the book. The book is intended for practicing fisheries professionals, researchers, professors, and advanced undergraduate and graduate students.



Conservation and Management of Marine Mammals

Weston Stokes

ISBN: 9781799601319 HB Price: \$ 230.00 Size: 7 × 10 Pages: 298 Year: 2020 Reprint Year: 2024

About the Book: Marine mammals are found in marine ecosystems around the globe. They are a diverse group of mammals with unique physical adaptations that allow them to thrive in the marine environment with extreme temperatures, depths, pressure, and darkness. This book is on conservation and management of the world's marine mammal populations. It provides a comprehensive, up-to-date review on the way we manage our interactions with whales, dolphins, seals and dugongs. It describes how wild fisheries and aquaculture interact with marine mammal populations and how we manage the protection of whale, dolphin and seals. The book also address issues such as the way in which ethics, genetics, acoustics, ecosystem models and pollution influence the management and conservation of marine mammals. It describes every species in detail, based on the very latest taxonomy, and a host of biological, ecological and sociological aspects relating to marine mammals. The intention of this book is both to summarize the state-of-the-art and to encourage innovation and further progress in this research field. It is an invaluable and accessible resource for all those involved with marine mammals, including scientists, managers, policy makers, industry representatives and students.

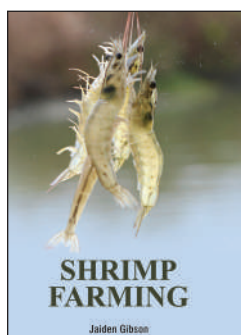


Freshwater Fish Culture Development and Management

Gaylord Hane

ISBN: 9781799601340 HB Price: \$ 249.95 Size: 7 × 10 Pages: 354 Year: 2020 Reprint Year: 2024

About the Book: Freshwater fish culture refers to raising and breeding aquatic animals (fish, shrimp, crab, shellfish, etc.) and plants for economic purposes by the use of ponds, reservoirs, lakes, rivers, and other inland waterways (including brackish water), which play an important role in the aquaculture industry. Now-a-days, the fish and fisheries industry is one of the fastest growing international commodity markets globally. This book presents not only exhaustive methodology but also strikes some balance between practical applications and more technical considerations. The book provides a comprehensive description of the production and husbandry of commercially important species of fish. In this book there is current research reports and development on the subject concerned have been meticulously incorporated. The purpose of this book is to provide a useful guide for aquaculture entrepreneurs, engineers, and investors. Figures, tables, and illustrations help to explain important concepts. The topics in the book are dealt with in such a manner that they could easily be understood by the students. The clarity of writing and completeness of detail makes it suitable for interested laypersons and trained professional fish culturists. It will serve for many years as a text cum reference book for anyone interested in freshwater fish culture. It is hoped that this book would facilitate teaching of the subject in Colleges & Universities.



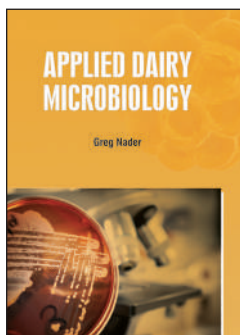
Shrimp Farming

Jaiden Gibson

ISBN: 9781799600763 HB Price: \$ 230.00 Size: 7 × 10 Pages: 286 Year: 2020 Reprint Year: 2024

About the Book: Shrimp farming is an aquaculture business that exists in either a marine or freshwater environment, producing shrimp or prawns (crustaceans of the groups Caridea or Dendrobranchiata) for human consumption. Shrimp farming has been one of the most important economic activities in many of the tropical countries of Asia and Latin America during the last three decades due to high demand mainly in USA, Europe and Japan. Shrimp export contributes significantly to the national economy, employment generation and livelihoods and has become an important consumable commodity accounting significantly to global trade in the recent years. When a catastrophe such as this happens, the farms are often abandoned and a new section of mangrove forest is cut down to open up a new operation. Farmed shrimp accounts for 55 percent of the shrimp produced globally. Most shrimp aquaculture occurs in China, followed by Thailand, Indonesia, India, Vietnam, Brazil, Ecuador and Bangladesh, and it has generated substantial income in these developing countries. Farming has made shrimp more accessible to an eager, shrimp-loving public in the U.S., Europe, Japan and elsewhere. Investors seeking profits have intensified farming methods with industrialized processes, sometimes at significant cost to the environment. This book provides a description of principles and practices of shrimp culture at one point in time and documents both historical events and conditions now.



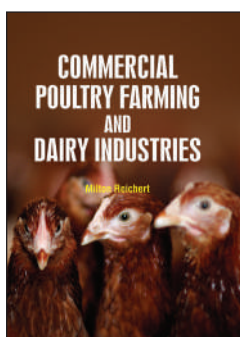


Applied Dairy Microbiology

Greg Nader

ISBN: 9781799600350 HB Price: \$ 185.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: Applied Dairy Microbiology discusses the microbiology of the rumen and the role of microorganisms in milk synthesis explores the causes and contamination of raw milk which offers solutions to problems associated with raw milk, fluid milk products, concentrated and dried milk. A dairy is a building used for the harvesting of animal milk mostly from cows or goats but also from buffalo sheep horses or camels for human consumption. A dairy is typically located on a dedicated dairy farm or section of a multi purpose farm that is concerned with the harvesting of milk. Terminology differs between countries. Milk's sanitary qualities are influenced by many factors in the course of production, processing, and delivery to the consumers. Milk is virtually sterile when it is synthesized in a healthy cow's udder (mammary gland). Cows, like humans, are natural reservoirs of bacteria. Many of these bacteria are not harmful to humans, but some may be harmful to humans even though the cows are not affected and appear healthy. The present book provides thorough coverage of dairy microbiology principles as well as practical applications including the latest developments in dairy starter cultures and genetic engineering techniques. The book also offers completely updated standards for good manufacturing practice, quality control and product development practices.

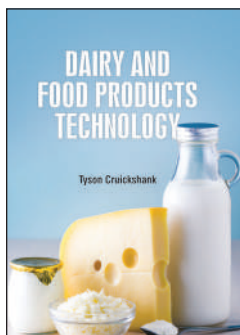


Commercial Poultry Farming and Dairy Industries

Milton Reichert

ISBN: 9781799600381 HB Price: \$ 205.00 Size: 7 × 10 Pages: 306 Year: 2020 Reprint Year: 2024

About the Book: Poultry Farming has been one of the most important subsidiary occupations of the farming community. It is a remunerative business both in rural and urban areas due to the requirement of small space, low capital investment and generates quick and regular income and employment throughout the year. Poultry production is not a business in which everyone may engage successfully. Before engaging in a poultry enterprise it is advisable to investigate the profitability of the business in the locality concerned and the markets available. Poultry has emerged as the fastest growing segment not only in the livestock sector, but of agriculture sector as a whole. Understand the principles and practices involved in the production, processing and marketing of fluid milk. Components of milk, principles of basic milk processing (e.g. pumping, pasteurization, separation), storage and distribution, and safety and quality of milk will be examined. New technologies in production, analytical testing methods and packaging systems will be explored. Milk Powder is a processed dairy product made by evaporating milk to dryness. Drying extends the shelf life of milk apart from reducing the weight and volume. Drying lowers the cost of transportation also. The object of this book is an attempt to place at the disposal of poultry men at large information relative to established and dependable practices.

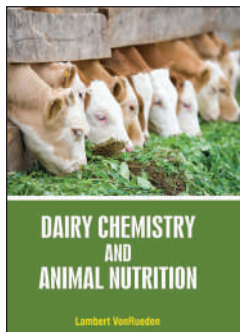


Dairy and Food Products Technology

Tyson Cruickshank

ISBN: 9781799600398 HB Price: \$ 195.00 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Dairy Technology is the industrial, non-farm phase of the tremendously large, dynamic and complex dairy industry. This phase represents a combination of science, engineering, business, and art as applied to all dairy and dairy-type foods and their industries. Dairy products, milk products or lacticinia are a type of food produced from or containing the milk of mammals. They are primarily produced from mammals such as cattle, water buffaloes, goats, sheep, camels and humans. Dairy products include food items such as yogurt, cheese and butter. In addition to skim and whole milk, a variety of useful dairy products are dried, including buttermilk, malted milk, instant breakfast, sweet cream, sour cream, butter powder, ice cream mix, cheese whey, coffee creamer, dehydrated cheese products, lactose, and caseinates. Many drying plants are built in conjunction with a butter-churning plant. These plants utilize the skim milk generated from the separated cream and the buttermilk produced from churning the butter. Most products are dried to less than 4 percent moisture to prevent bacterial growth and spoilage. However, products containing fat lose their freshness rather quickly owing to the oxidation of fatty acids, leading to rancidity. Addressing both theoretical and practical issues in dairy technology, this work offers coverage of the basic knowledge and scientific advances in the production of milk and milk-based products.

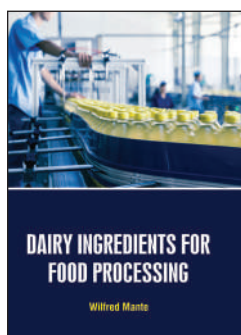


Dairy Chemistry and Animal Nutrition

Lambert Vonrueden

ISBN: 9781799600404 HB Price: \$ 185.00 Size: 7 × 10 Pages: 328 Year: 2020 Reprint Year: 2024

About the Book: Dairy Chemistry and Animal Nutrition has undergone remarkable development in the last three decades. These developments, along with recent widespread application of the newest biomedical technologies, have imbued optimism that new strategies can be developed for controlling the important diseases that for centuries have been the scourges of mankind. Dairying has developed into a highly technical industry. This evolutionary process continues, and it is desirable that the type of training should keep pace with or even anticipate the changing conditions of the industry. Milk has been a food source for humans since prehistoric times; from human, goat, buffalo, sheep, yak. Milk and honey are the only articles of diet whose sole function in nature is food. It is not surprising, therefore, that the nutritional value of milk is high. Nutritional science investigates the metabolic and physiological responses of the body to diet. With advances in the fields of molecular biology, biochemistry and genetics, the study of nutrition is increasingly concerned with metabolism and metabolic pathways; the sequences of biochemical steps through which substances in living things change from one form to another. This book contains the fundamental and basic information of subject and the selection of contents makes it an appropriate book for the students as well as for scholars.

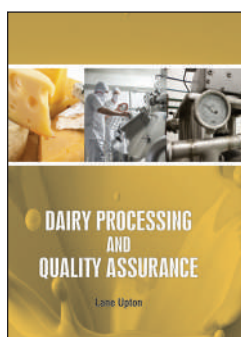


Dairy Ingredients for Food Processing

Wilfred Mante

ISBN: 9781799600411 HB Price: \$ 205.00 Size: 7 × 10 Pages: 296 Year: 2020 Reprint Year: 2024

About the Book: Milk, an intricate combination of hundreds of different substances, is the principal product of the dairy industry. It is rich in nutrients and is considered one of nature's perfect foods. Milk and milk products have been explored and analyzed more than most foods. From food technology to human nutrition, the science of milk combines conventional practices with modern techniques. The ingredient profiles listed in the list below include an overview, composition details, characteristics, various end uses and functional properties of a variety of dairy ingredients used in today's dynamic further processing industry. Milk is a valuable nutritious food that has a short shelf-life and requires careful handling. Food processing can decrease the cost of foods. For example, frozen vegetables have a similar nutritional value as fresh ones, but at a lower price, as they have already been prepared, do not contain inedible parts, can be bought in bulk, and can last longer. This way, processing increases the shelf life of food, and decreases the amount of waste, reducing thereby the overall costs of food production. The popular applications of dairy ingredients in the manufacture of food products such as dairy foods, bakery products, processed cheeses, processed meats, chocolate as well as confectionery products, functional foods, and infant.

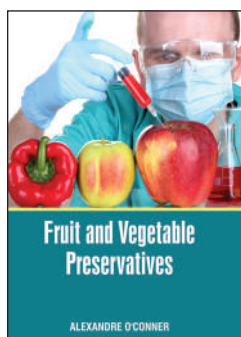


Dairy Processing and Quality Assurance

Lane Upton

ISBN: 9781799600428 HB Price: \$ 195.00 Size: 7 × 10 Pages: 288 Year: 2020 Reprint Year: 2024

About the Book: Dairy processing involves conversion of raw milk into fluid milk products, and an array of dairy products such as butter, yogurt and fermented milks, cheeses, dry milk powders, dry whey products, ice cream, and frozen desserts, and refrigerated desserts. Dairy Processing and Quality Assurance gives a complete description of the processing and manufacturing stages of market milk and major dairy products from the receipt of raw materials to the packaging of the products, including quality assurance aspects. Each country has its own regulations for marketable milk production that have to be followed precisely. Hygiene and compliance with regulations are key to guaranteeing the quality of packaged milk. As computerized systems become instrumental in providing for the safety of dairy products, it verify that proper controls were employed to assure that accurate, consistent and reliable results are obtained from computer control and data storage systems. This book presents new information on the technology of ohmic heating for milk pasteurization. It goes on to provide an overview of the commercial thermal, non-thermal technologies, and hybrid technologies for milk pasteurization. The book begins with an overview of the dairy industry, dairy production and consumption trends.

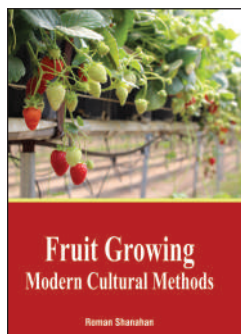


Fruit and Vegetable Preservatives and Engineering

Alexandre O'Conner

ISBN: 9781684699889 HB Price: \$ 185.00 Size: 7 × 10 Pages: 342 Year: 2020 Reprint Year: 2024

About the Book: The fruit and vegetable preservatives sector is growing rapidly. The term fruit and vegetable preservatives refer to any one of a number of techniques used to prevent food from spoiling. It includes methods such as canning, pickling, drying and freeze-drying, irradiation, pasteurization, smoking, and the addition of chemical additives. Fruit and vegetable preservatives has become an increasingly important component of the food industry as fewer people eat foods produced on their own lands, and as consumers expect to be able to purchase and consume foods that are out of season. The book is an introduction to fruit and vegetable preservatives meant primarily for undergraduate students. Every concept included in this book has been explained in a lucid style. The uniqueness of this book is great due to the blending of the author's many years of teaching experience in food science and nutrition. The book can be used as a valuable reference text for the undergraduate and postgraduate level courses in the discipline of food science and technology. The book is also useful to the teachers and professionals for understanding important aspects of food processing.



Fruit Growing: Modern Cultural Methods

Roman Shanahan

ISBN: 9781684699896 HB Price: \$ 195.00 Size: 7 × 10 Pages: 342 Year: 2020 Reprint Year: 2024

About the Book: Fruit farming, growing of fruit crops, including nuts, primarily for use as human food. The subject of fruit and nut production deals with intensive culture of perennial plants, the fruits of which have economic significance (a nut is a fruit, botanically). It is one part of the broad subject of horticulture, which also encompasses vegetable growing and production of ornamentals and flowers. This book is a complete guide to fruit growing, with information on storage, planting, fertilising, pruning, pests and diseases, harvesting, tools, and many other related aspects. Written in simple, plain language and full of handy tips and invaluable information, this book will appeal to the budding gardener with an interest in growing fruit, and is not to be missed by collectors.



Milk and Milk Products Technology

Darrick Blanda

ISBN: 9781799600466

HB

Price: \$ 195.00

Size: 7 × 10

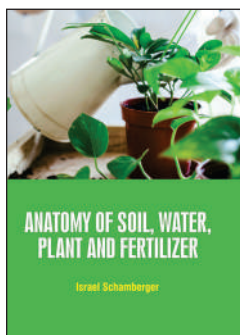
Pages: 338

Year: 2020

Reprint Year: 2024

About the Book: Milk has been an important food for man since the domestication of cattle and the adoption of a pastoralist agriculture. It is also the most versatile of the animal-derived food commodities and is a component of the diet in many physical forms. Milk is as ancient as humankind itself, as it is the substance created to feed the mammalian infant. All species of mammals, from humans to whales, produce milk for this purpose. Many centuries ago, perhaps as early as 6000-8000 BC, ancient peoples learned to domesticate species of animals for the provision of milk to be consumed by them. Cream may be defined as that portion of milk which is rich in milk fat or that portion of milk into which fat has been gathered and which contains a large portion of milk fat, or when milk fat is concentrated into a fraction of the original milk. Butter is principally composed of milk fat, moisture, salt and curd. It also contains small amount of lactose, acids, phospholipids, air, microorganisms, enzymes and vitamins. The demand for quality milk products is increasing throughout the world. Food patterns are changing from eating plant protein to animal protein due to increasing incomes around the world, and the production of milk and milk products is expanding with leaps and bounds. The purpose of this text book is a sincere venture and effort to provide the basic fundamentals in a compact, simple, varied, and vivid picture of Milk and Milk products Technology.



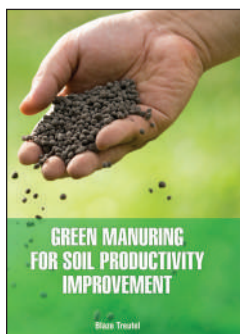


Anatomy of Soil, Water, Plant and Fertilizer

Israel Schamberger

ISBN: 9781799601234 HB Price: \$ 230.00 Size: 7 × 10 Pages: 324 Year: 2020 Reprint Year: 2024

About the Book: Anatomy is the branch of biology concerned with the study of the structure of something and their parts. It is a branch of natural science which deals with the structural organization of living things. This book gives the routinely used analytical methods for soil, water, fertilizers and manures as single source. It is mainly meant for teaching research in soil chemistry, soil fertility and fertilizers production and water quality. The present work is unique in that sense it includes all tested proved and widely used methods along with principles and apt interpretations for determination of nutrients in plant and soil and quality of fertilizers and water, which are concern with plant growth. This guide details necessary facilities for soil, water, fertilizers and plant analysis. In addition, the book consists of several illustrations and diagrams for better understanding of the concepts. It is an encyclopedia of information for professionals and students of this field. This book brings together all relevant technologies new and existing ones. This book presents information in an easy-to-understand, accessible manner for students at every level. Readers, professionals, researchers and students will find this book valuable.

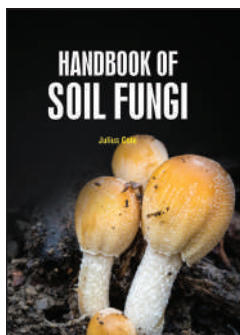


Green Manuring for Soil Productivity Improvement

Blaze Treutel

ISBN: 9781799601142 HB Price: \$ 230.00 Size: 7 × 10 Pages: 302 Year: 2020 Reprint Year: 2024

About the Book: Green manures, particularly the leguminous crops, are of great value for improving soil fertility. The beneficial effect of green manures includes the microbiological, chemical and physical properties of soil. Green manures are particularly recognized for their nitrogen supplying capacity. The purpose of this chapter is to demonstrate the importance of green manure and the use of crop residues as management for soil fertility. The potential to increase/sustain productivity by providing nutrients. The main factors influencing the decomposition and mineralization processes, green manure techniques, presenting the main green manures, criteria for choosing, managements, potential for nutrient accumulation. Finally, we use some examples to demonstrate the potential nutrient supply of crop residues from the main crops grown in the tropics. The difficulties and limitations involved are also discussed. Long term work to evaluate the effects of contrasting fertility building strategies in organic field vegetable systems. It has also been involved with an international project to develop a computer model which will help with planning rotations that include green manures. Focussed on the use of winter green manures to reduce nitrate leaching, Leguminous fertility building crops, focussing particularly on nitrogen fixation and utilisation. Incorporation of green manuring different treatment is a low cost and effective technology in minimizing the investment cost of chemical fertilizers and safeguarding the productive capacity of the soil by improving physical and chemical properties. The addition of suitable green manuring crops in cropping system can reduced the fertilizer usage to succeeding crop and increase the nutrient uptake and finally results in better crop growth and yields.

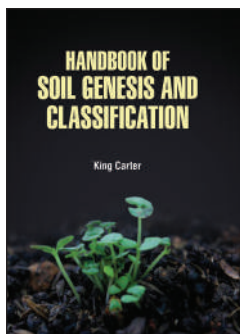


Handbook of Soil Fungi

Julius Cole

ISBN: 9781799601159 HB Price: \$ 230.00 Size: 7 × 10 Pages: 334 Year: 2020 Reprint Year: 2024

About the Book: Fungi are microscopic cells that usually grow as long threads or strands called hyphae, which force their way between particles of soil, rocks and roots. They are closely related to animals and plants, and have been around for an estimated billion or so years. At least 70,000 distinct species of soil fungi have been identified worldwide. These can be divided taxonomically into four groups: Zygomycota, Ascomycota, Basidiomycota, and Deuteromycota. It is perhaps easier, however, for everyday observers to think of them in terms of their function and metabolic properties. A number of biotechnologically, industrially and environmentally important fungal organisms are found in the soil. This book provides an exhaustive account of the description of many species of soil fungi belonging to different genera. This book will be an important contribution to mycofloristics. It provides laboratory methods dealing with isolation, cultivation, culture, etc. and ecological distribution of fungal species from various soils. The microscopic and macroscopic details of the fungal species, pathogenecity and clinical significance are special features of this book. It will serve as a guide to experts as well as beginners in the study of soil fungi, their enumeration and their identification.

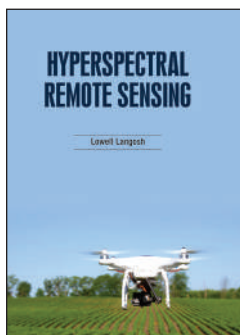


Handbook of Soil Genesis and Classification

King Carter

ISBN: 9781799601166 HB Price: \$ 230.00 Size: 7 × 10 Pages: 282 Year: 2020 Reprint Year: 2024

About the Book: Soil is the upper weathered layer of the earth's crust. It is a dynamic entity which is always undergoing physical, chemical and biological changes. Soils develop from parent material by various weathering processes. Organic matter accumulation, decomposition, and humification are as critically important to soil formation as weathering. Key soil forming processes especially important to macro-scale patterns of soil formation are: Laterization, Podsolization, Calcification, Salinization, Gleization. This book is an unparalleled resource on soil formation and classification. This text contains multiple soil profiles and includes information on new classification systems and emerging technologies and databases. This classic textbook explains the function and use of soils, soil formation and categorization, and details how this dynamic natural entity evolves from natural factors and processes and interfaces with ecosystems and human endeavors. This comprehensive work covers the diverse needs of soil science instructors, majors, minors, and graduate students, and serves as an outstanding reference for soil scientists, agricultural and natural resources engineers and economists, and others in related fields such as ecology, natural resources, and land use and planning. This text will be a must have reference for all those in soil science and related fields.

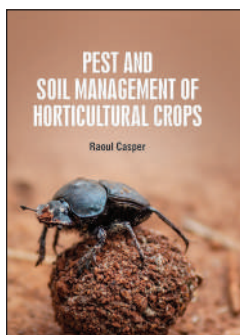


Hyperspectral Remote Sensing

Lowell Langosh

ISBN: 9781799601081 HB Price: \$ 225.00 Size: 7 × 10 Pages: 284 Year: 2020 Reprint Year: 2024

About the Book: The book comprises various aspects of design of hyperspectral sensors and their trade off, described many of the international sensors flown on-board different space missions and also indigenous efforts made in the development of aerial hyperspectral sensor. Various image processing techniques used in the analysis of hyperspectral data are discussed. Review specific algorithms developed to improve spectral discrimination from Indian hyperspectral data. Use of hyperspectral data in the discrimination of crops, quantitative estimation of biophysical parameters and in understanding and detection of abiotic and biotic stress in vegetation through a number of case studies. How rapid and reliable assessment of various soil characteristics using hyperspectral data in conjunction with laboratory-measured spectra can be done to facilitate mapping of soils has been discussed. A radiative transfer model to simulate the effects of inelastic scattering on upwelling radiance in coastal and turbid waters using narrow band data has been discussed. Hyperspectral remote sensing has proved to be an extremely powerful tool in the exploration of planetary surfaces. These articles together provide a snapshot of the work happening in this field in the country and the trends. Considering that there will be Indian earth observation missions carrying full-fledged hyperspectral sensors in the near future and Chandrayaan-2 and possibly other planetary missions at the anvil, this compilation of review articles should be useful to a large community of researchers.

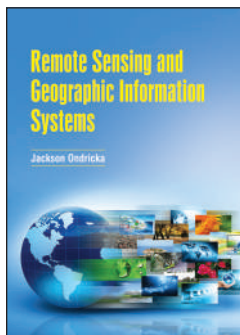


Pest and Soil Management of Horticultural Crops

Raoul Casper

ISBN: 9781799601173 HB Price: \$ 225.00 Size: 7 × 10 Pages: 312 Year: 2020 Reprint Year: 2024

About the Book: Horticulture has been defined as the culture of plants, mainly for food, materials, comfort and beauty. Horticultural crops are an important source of carbohydrates, proteins, organic acids, vitamins and minerals for human nutrition. A pest is any animal or plant detrimental to humans or human concerns, including crops, livestock and forestry. Pests affect human beings by feeding on all kinds of plants including crop plants, forest trees, medicinal plants and even stored products causing huge amount of loss and also deterioration of food quality. Plant diseases may be due to pathogenic or non-pathogenic organisms. Due to perishability in nature horticultural crops respire, transpire and ripen upon harvest thus deteriorating the food value of the produce for human consumption. In view of above, the present book deals with productivity enhancing technologies such as use of high yielding varieties/hybrids, high density planting, micro-irrigation, fertigation, protected cultivation, bio-technological approaches, integrated nutrient, weed, pest, disease and nematode management in general and crop-wise in particular. The book is illustrated with excellent quality photographs enhancing the quality of publication. The book is written in lucid style, easy to understand language along with adoptable recommendations for enhancing the productivity. It will be very beneficial to teachers, students, scientists, research planners and research workers.

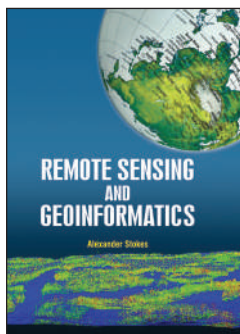


Remote Sensing and Geographic Information Systems

Jackson Ondricka

ISBN: 9781799600602 HB Price: \$ 225.00 Size: 7 × 10 Pages: 332 Year: 2020 Reprint Year: 2024

About the Book: Remote sensing has provided a new impetus for the earth, resource and environmental scientists. This gift from the space technology has to be fully harnessed for tackling the problems of the country. Increasing population and diminishing resources have compelled our planners, leaders and scientists to consider better ways for the management of natural resources. Remote Sensing and GIS is specifically designed to serve as a basic text for undergraduate courses in civil engineering, geoinformatics/geomatics engineering, geotechnical engineering, survey engineering, and environmental engineering. It will equally meet the requirements of undergraduate courses in geological science, environmental science, geography, geophysics, earth resources management, environmental management, and disaster management. Geographic information systems provide a method for integrating and analysing spatial information such as where is the nearest movie theatre? alongside related non-spatial information. GIS have three major capabilities and can operate on a range of platforms. A map, however, is only one way you can work with geographic data in a GIS, and only one type of product generated by a GIS. The book starts with the introduction of GIS and its various components and functionalities and goes on to cover map projection systems, different data models and data input, spatial analysis and surface modelling aspects of GIS. A geographic information system (GIS) is a computer-based tool for mapping and analyzing features and events on earth. GIS technology integrates common database operations, such as query and statistical analysis, with maps. On the other hand, remote sensing is the science of collecting data regarding an object or a phenomenon without any physical contact with the object. The book serves as a source of information for professionals who come across remote sensing and GIS in their work and would like to learn more about its principles and practical uses to support their professional/research activity.

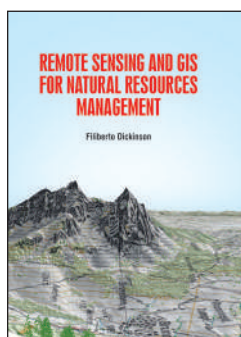


Remote Sensing and Geoinformatics

Alexander Stokes

ISBN: 9781799601098 HB Price: \$ 230.00 Size: 7 × 10 Pages: 324 Year: 2020 Reprint Year: 2024

About the Book: Beginning with the history and basic concepts of remote sensing and GIS, the book gives an exhaustive coverage of optical, thermal and microwave remote sensing, global navigation satellite systems (such as GPS), digital photogrammetry, visual image analysis, digital image processing, spatial and attribute data model, geospatial analysis, and planning, implementation and management of GIS. It also presents the modern trends of remote sensing and GIS with an illustrated discussion on its numerous applications. The appendices provide the prerequisites required for understanding remote sensing and GIS technology. This book provides basic principles and techniques of remote sensing, microwave remote sensing, with mapping technology, remote sensing platforms and sensors and data analysis techniques. Further, the book deals with GIS data quality issues, GIS data analysis and modelling, attribute data management, GIS data input & editing and integration & linkage of Remote Sensing and GIS. The Photogrammetry with very few topics of digital photogrammetry, Global Positioning System (GPS) and the applications like, Forest Resources Management, Watershed Management and Natural Disaster Management: Landslides are added. Since, the users of geomatics technology for various applications have been using high resolution image data, the photogrammetry with fundamental concepts are included for better understanding of the student community. The application chapters are the output of the sponsored research projects of the author. These chapters are very much useful to the students who focussed their research on geospatial technologies.

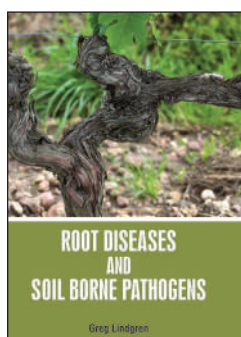


Remote Sensing and GIS for Natural Resources Management

Filiberto Dickinson

ISBN: 9781799601104 HB Price: \$ 230.00 Size: 7 × 10 Pages: 280 Year: 2020 Reprint Year: 2024

About the Book: Remote sensing and Geographical Information System (GIS) offers an abundant opportunity to monitor and manage natural resources at multi-temporal, multi-spectral and multi-spatial resolution. It is an urgent need to understand the specialized capabilities of an ever-expanding array of image sources and analysis techniques for natural resource managers. In this review, we compile the various applications of remote sensing and GIS tools that can be used for natural resource management (agriculture, water, forest, soil, natural hazards). The book is useful for the natural resource managers to understand and more effectively collaborate with remote sensing scientists to develop and apply remote sensing science to achieve monitoring objectives. GIS is a suitable technology for the understanding of natural resource management. It is an effective technique to learn the factors affecting environment including its result and execution. The geospatial data taken through this GIS meet the sustainable use of natural resources. Thus, GIS in natural resource management guides in managing the resources properly and wisely in present and future generation. In addition, GIS in natural resource management helps in management of natural resources effectively and efficiently. GIS has important uses in different fields, including in the environmental field.



Root Diseases and Soil Borne Pathogens

Greg Lindgren

ISBN: 9781799601180 HB Price: \$ 225.00 Size: 7 × 10 Pages: 340 Year: 2020 Reprint Year: 2024

About the Book: Pathogens are parasitic; that is, they depend on a host to survive and reproduce. Soil borne pathogens include fungi, bacteria and nematodes. Soil borne pathogens prefer to live within the soil, causing root disease. These creatures will not only harm a plant, they can even affect the soil itself. They cause severe diseases in many crops. They have common features based on their close connection with the soil, which has a strong influence on their survival and capacity to cause disease. This book discusses the significance of fungi infecting the roots, and emphasizes the significant diseases of roots and their symptoms. It also describes the behavior of various plant pathogenic bacteria. In addition, this book discusses the morphology, classification, nomenclature, multiplication and translocation of various pathogens infecting the plants. The book explains the fundamentals of biological control, which include the pathosystem concept, the behavior of the soil microflora in the soil, the reservoirs for infection, the processes of pathogen decline, and the integrated effects on the decline of the pathogen. This book will be of great value to soil microbiologists and plant pathologists. This book will undoubtedly be widely read, routinely consulted and provides basic concepts and treatments of common diseases of plants.



Soil and Water Microbiology

Brice Glover

ISBN: 9781799601197 HB Price: \$ 230.00 Size: 7 × 10 Pages: 328 Year: 2020 Reprint Year: 2024

About the Book: Soil and water microbiology is the scientific discipline that is concerned with the study of all biological aspects of the microorganisms (bacteria, archaea, viruses, fungi, parasites and protozoa) that exist in the soil environment and water. Soils into which crop plants root and from which they obtain essential minerals and water contain huge arrays of microbes. Many have highly beneficial effects on crop growth and productivity, others are pathogens causing diseases and losses to yield and quality, a few microbes offer protection from these pathogenic forms and others have little or no effect. This book explores current knowledge for each of these aspects of soil and water microbiology and indicates where future progress is most likely to aid in increasing crop productivity by means which are environmentally benign and beneficial. This is a valuable book for those who require up to date knowledge of the impact of soil and water microbiology on sustainable crop production. This edition provides readable, practical and impactful information for its many applied and fundamental disciplines. Professionals will turn to this text as a reference for fundamental knowledge in their field or to study management practices.

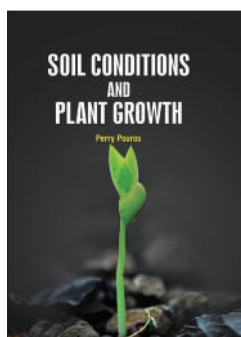


Soil Born Diseases of Ornamental Plants

Olaf Williamson

ISBN: 9781799601050 HB Price: \$ 230.00 Size: 7 × 10 Pages: 278 Year: 2020 Reprint Year: 2024

About the Book: Soil-borne diseases result from a reduction of biodiversity of soil organisms. Restoring beneficial organisms that attack, repel, or otherwise antagonize disease-causing pathogens will render a soil disease-suppressive. Plants growing in disease-suppressive soil resist diseases much better than in soils low in biological diversity. Beneficial organisms can be added directly, or the soil environment can be made more favorable for them through use of compost and other organic amendments. Compost quality determines its effectiveness at suppressing soil-borne plant diseases. Compost quality can be determined through laboratory testing. Plant diseases result when a susceptible host and a disease-causing pathogen meet in a favorable environment. If any one of these three conditions were not met, there would be no disease. Many intervention practice focus on taking out the pathogen after its effects become apparent. This book emphasizes making the environment less disease-favorable and the host plant less susceptible. It identifies diseases, recognizes the spread of many known diseases to a wider range of ornamental plants, and reflects up-to-date control methods. Illustrations have been added and there are expanded discussions on fungicides, bactericides.

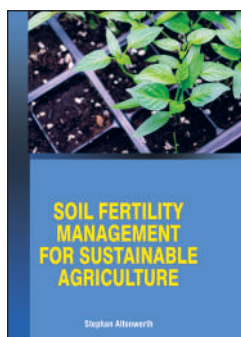


Soil Conditions and Plant Growth

Perry Poulos

ISBN: 9781799601203 HB Price: \$ 230.00 Size: 7 × 10 Pages: 348 Year: 2020 Reprint Year: 2024

About the Book: Soil in itself represents a complicated physical, chemical, and biological system by which the plant is supplied with the water, nutrients, and oxygen it requires for its development. Plant growth is affected by the amount of moisture and air in the soil and by the temperature of the soil. This book covers all the aspects of the interactions between plants and soil, provide essential reading for all students and professionals studying and working in agriculture and soil science. Subject areas covered range from crop science and genetics; soil fertility and organic matter; nitrogen and phosphorus cycles and their management; properties and management of plant nutrients; water and the soil physical environment and its management; plants and change processes in soils; management of the soil/plant system; and new challenges in a changing environment. It provides a very timely account on how better to understand and manage the many interactions that occur between soils and plants. This book is sure to become the book of choice - as a recommended text for students and as an invaluable reference for those working or entering into the industry. An essential purchase for all universities and research establishments where agricultural, soil, and environmental sciences are studied and taught.

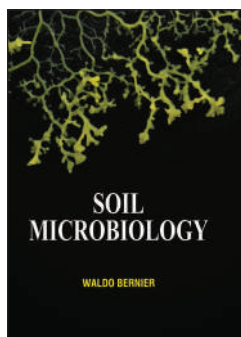


Soil Fertility Management for Sustainable Agriculture

Stephan Altenwerth

ISBN: 9781799601210 HB Price: \$ 230.00 Size: 7 × 10 Pages: 334 Year: 2020 Reprint Year: 2024

About the Book: This book focused exclusively on the management of soil organic matter. If you follow practices that build and maintain good levels of soil organic matter, you will find it easier to grow healthy and high-yielding crops. Plants can withstand droughty conditions better and won't be as bothered by insects and diseases. By maintaining adequate levels of organic matter in soil, you have less reason to use as much commercial fertilizer, lime, and pesticides as many farmers now purchase. Soil organic matter is that important. It is clear that agriculture sustains and defines our modern lives, but it is often disruptive of natural ecosystems. This is especially true for plant communities, animal populations, soil systems, and water resources. Understanding, evaluating, and balancing detrimental and beneficial agricultural disturbances of soil and water resources are essential tasks in human efforts to sustain and improve human well-being. Such knowledge influences our emerging ethics of sustainability and responsibility to human populations and ecosystems of the future. A book like this one cannot give exact answers to problems on specific farms. In fact, we are purposely staying away from recipe-type approaches. There are just too many differences from one field to another, one farm to another, and one region to another, to warrant blanket recommendations. To make specific suggestions, it is necessary to know the details of the soil, crop, climate, machinery, human considerations, and other variable factors. Good soil management needs to be adaptive and is better achieved through education and understanding than with simple recommendations.

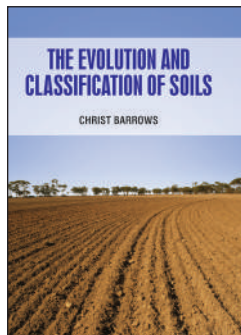


Soil Microbiology

Waldo Bernier

ISBN: 9781799601227 HB Price: \$ 230.00 Size: 7 × 10 Pages: 338 Year: 2020 Reprint Year: 2024

About the Book: Soil microbiology is the scientific discipline that is concerned with the study of all biological aspects of the microorganisms that exist in the soil environment. Soil microorganisms can be classified as bacteria, actinomycetes, fungi, algae and protozoa. Each of these groups has characteristics that define them and their functions in soil. Knowledge of soil microbiology is central to our understanding of organisms and their processes and interactions with their environment. This edition is the study and understanding of soil biota, their functions, and the dynamics of soil organic matter which has been revolutionized by molecular and instrumental techniques, and information technology. This work relates the breakthroughs in knowledge in this important field to its history as well as future applications. This book provides readable, practical, impactful information for its many applied and fundamental disciplines. This text includes information on soil interactions with organisms involved in human and plant disease. It provides integrated concepts related to soil biota, diversity, and functions which allow readers in multiple disciplines to understand the complex soil biota and their functions. Professionals will use this text as a reference for fundamental knowledge in their field or to gain information in management practices.

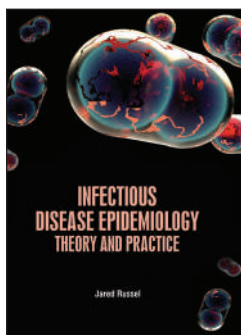


The Evolution and Classification of Soils

Christ Barrows

ISBN: 9781799601241 HB Price: \$ 230.00 Size: 7 × 10 Pages: 280 Year: 2020 Reprint Year: 2024

About the Book: Developments in soil classification have accompanied parallel progress in our understanding of the soil system. However the theories behind the classifications and the purposes for which they were created have changed over time. The classification of soils originated from three main sources: from early empirical soil surveys, from folk soil classifications and from scientific theory of pedology. In terms of evolution, soil classification methods can be broadly categorized into ancient, early/pre-modern and modern methods of soil classification. In terms of scope, they can be classified as local/national, regional and international. It is hoped that this comprehensive text will help to rally soil scientists around the world to develop an acceptable classification system for soils. This reference book can be used to illustrate the current state of national and international soil classification systems. This book provides modifications to classification systems to meet new demands. This book serves as a foundation for the revision of existing soil taxonomies and the creation of new ones. It provides the taxonomic keys necessary for the classification of soils in a form that can be used easily in the field. Readers and professionals of this field will find this text very valuable.



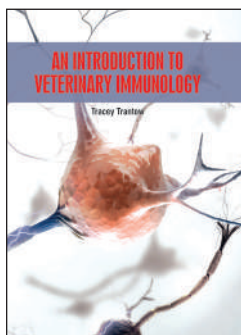
Infectious Disease Epidemiology: Theory and Practice

Jared Russel

ISBN: 9781799601371 HB Price: \$ 225.00 Size: 7 × 10 Pages: 366 Year: 2020 Reprint Year: 2024

About the Book: Infectious disease epidemiology is the application of methods and approaches used to understand the distribution and determinants of health and disease to the study of infections. This book provides a comprehensive and succinct overview of the subject and covers related specialist areas needed to understand the epidemiology of infections. The book is organized in such a way that a reader can sequentially read chapters or dip in to particular concepts. It is a practical and concise guide which not only provides basic information and concepts used in epidemiology, but also the remarkable advances in this discipline as a result of progress in molecular biology, genomics, statistics and computing. In this book, some chapters with basic epidemiologic information such as outbreak investigations, study design, clinical trials, clinical epidemiology and basic statistical methods for application in epidemiology have been included. This is a book which is easy to read and set out in comprehensive but clear and precise scientific language. This book may serve to students and epidemiologists as a reference guide which provides basic and new concepts in infectious epidemiology.



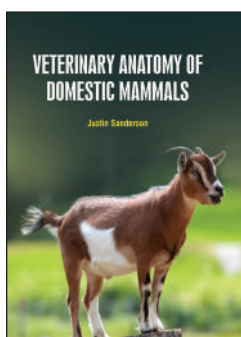


An Introduction To Veterinary Immunology

Tracey Trantow

ISBN: 9781799601418 HB Price: \$ 249.95 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: Veterinary immunology is defined as the immunology of domestic and wild animals having economical or sentimental value to man, provides both practical knowledge that is useful to animal husbandry, and new insights into fundamental immunology. This text explores the immunologic concerns of both large and small animals and is the only complete resource on immunology for veterinary practitioners. It is a comprehensive coverage which clearly explains the general principles of immunology. This edition is loaded by the latest advances and topics in the field. It features a straight forward presentation of basic immunologic principles along with thorough and timely information on the most significant immunologic diseases and responses seen in domestic animals. It defines new immunologically based diagnostic tools and immunotherapeutic approaches, including vaccine strategies and resistance of domestic animals to disease might also be improved through genetic selection of animals for immunological traits. Diagrams and illustrations in the book explain the concepts clearly. This book presents information in an easy to understand, accessible manner for students at every level. Readers will find this book very useful.

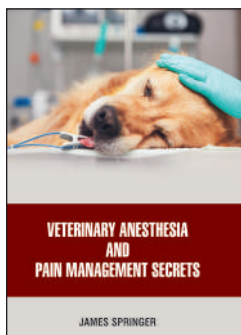


Veterinary Anatomy of Domestic Mammals

Justin Sanderson

ISBN: 9781799601470 HB Price: \$ 249.95 Size: 7 × 10 Pages: 326 Year: 2020 Reprint Year: 2024

About the Book: Veterinary anatomy is the study of the internal biological structures and systems of animals, including the respiratory, cardiovascular, reproductive and neurological systems. Undergraduate programs in veterinary technology and animal science often include animal anatomy classes. This book is a standard textbook for students and practitioners alike. It provides basic anatomical knowledge of domestic animals. This edition will get students ready for both veterinary exams and clinical practice and will keep students at the cutting edge. Excellent didactic figures and clear structures make both studying and referencing fun. This book is of anatomical basics and clinical specials in catchy combination with outstanding photographs and illustrations. This edition describes the gross systematic and topographical anatomy of domestic mammals. The present book is aimed to create a combined collection of study material for medical professionals, researchers and students. The book describes the anatomical relationships to microscopic anatomy, histology, embryology and physiology. Greatest emphasis is given to dog, cat and horse, with relevant information on ox/cow, pig, sheep, goat and rabbit. It is a life-long source of reference for veterinary students, practitioners, educators and researchers.

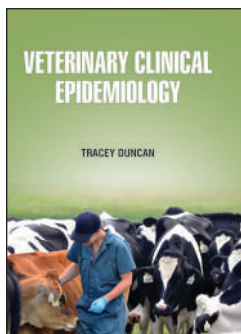


Veterinary Anesthesia and Pain Management Secrets

James Springer

ISBN: 9781799601517 HB Price: \$ 249.95 Size: 7 × 10 Pages: 300 Year: 2020 Reprint Year: 2024

About the Book: Veterinary anesthesia is anesthesia performed on non-human animals by a veterinarian or a Registered Veterinary Technician. Anesthesia is used for a wider range of circumstances in animals than in people, due to animals' inability to cooperate with certain diagnostic or therapeutic procedures. Veterinary anesthesia includes anesthesia of the major species: dogs, cats, horses, cattle, sheep, goats, and pigs, as well as all other animals requiring veterinary care such as birds, pocket pets, and wildlife. It is comprehensive, focused and covers one of the most important and fastest-emerging specialties in veterinary medicine. The topics covered in this text are patient management, preparation, pharmacology, monitoring, anesthetic complications, anesthesia and systemic disease, special anesthetic considerations, regional anesthesia, and pain management for animals of wild, zoo and laboratory. It is a gold-standard reference for anesthesia and pain management in veterinary patients. It is a well written reference on veterinary anesthesia and analgesia, combining state-of-the-art scientific knowledge and clinically relevant information. This book also contains several illustrations, tables and diagrams for better understanding of the concepts. It presents information in a user-friendly format for students at every level. Readers will find this book valuable.

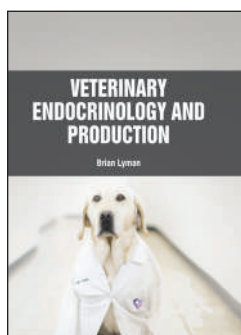


Veterinary Clinical Epidemiology

Tracey Duncan

ISBN: 9781799601494 HB Price: \$ 249.95 Size: 7 × 10 Pages: 330 Year: 2020 Reprint Year: 2024

About the Book: Epidemiology is the study of the distribution and determinants of health-related states or events (including disease), and the application of this study to the control of diseases and other health problems. Various methods can be used to carry out epidemiological investigations: surveillance and descriptive studies can be used to study distribution; analytical studies are used to study determinants. Veterinary epidemiology is a key component in a number of the global grand challenges relating to disease control, food security and climate change. This edition focuses on developing a deeper understanding of epidemiology and exemplifies how an improved capacity for interpreting and critiquing available literature ultimately leads to improved patient care. The book consists of figures, tables and examples of the application of epidemiology in clinical practice. It also includes a larger selection of international research, hypothesis testing, survey design, sampling and epidemiologic concepts related to the practice of evidence-based medicine. This book provides practitioners and researchers with the knowledge and tools to understand, critically assess, and make use of the medical literature that is vital to the treatment of animal patients.

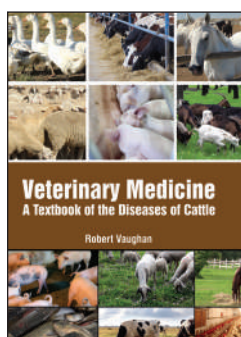


Veterinary Endocrinology and Production

Brian Lyman

ISBN: 9781799601425 HB Price: \$ 249.95 Size: 7 × 10 Pages: 294 Year: 2020 Reprint Year: 2024

About the Book: Endocrinology is a branch of biology and medicine dealing with the endocrine system, its diseases, and its specific secretions known as hormones. Hormones have many different functions and modes of action; one hormone may have several effects on different target organs, and, conversely, one target organ may be affected by more than one hormone. When this field is used in veterinary practice it is known as Veterinary Endocrinology. This text explains the role of hormones in improving and monitoring the production, performance, reproduction, behavior and health of animals. With its focus on livestock animals - cattle, pigs, sheep and horses, as well as poultry and fish-the book uses an integrative approach to cover endocrine concepts across species. This edition includes topics of every section of this field. It is an essential text for students in animal and veterinary sciences as well as those in academia and industry that are interested in applications of endocrinology in animal production systems. This edition provides students of veterinary medicine and animal science with a concise and practical textbook specifically for endocrinology and reproduction in domestic animals. The text blends practitioner and student needs to provide a physiological foundation with clinical flavour.



Veterinary Medicine: A Textbook of the Diseases of Cattle, Sheep, Pigs, Goats and Horses

Robert Vaughan

ISBN: 9781799601500 HB Price: \$ 249.95 Size: 7 × 10 Pages: 338 Year: 2020 Reprint Year: 2024

About the Book: Veterinary medicine is the branch of medicine that deals with the prevention, diagnosis and treatment of disease, disorder and injury in animals. The scope of veterinary medicine is wide, covering all animal species, both domesticated and wild, with a wide range of conditions which can affect different species. Animals benefit from biomedical research, as medical research carried out on animals, leads directly to veterinary treatments. Vaccines now exist for fatal diseases. Advances in veterinary medicine have helped to reduce the loss of farm and herd animals to sickness and disease, saving livelihoods all over the world. This edition is well- written text consisting of all old and new diseases, based on literature published worldwide. The book is divided into different chapters which describe clinical examination and the manifestation of disease in organ systems and specific diseases of the animal species, their causes, epidemiology, pathophysiology, clinical and pathological manifestations, treatment, control and prevention, and zoonotic risk. It is directed primarily at students of veterinary medicine and at practicing veterinarians and field workers. It will be extensively used as a reference by veterinarians in large and mixed animal practice around the world.

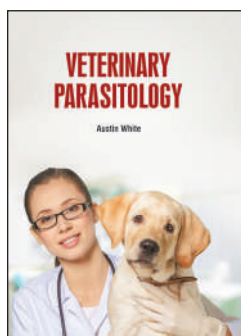


Veterinary Microbiology and Microbial Disease

Stewart Peake

ISBN: 9781799601449 HB Price: \$ 190.00 Size: 7 × 10 Pages: 310 Year: 2020 Reprint Year: 2024

About the Book: Veterinary Microbiology is concerned with microbial (bacterial, fungal, viral) diseases of domesticated animals (livestock, companion animals, fur-bearing animals, game, poultry, fish) that supply food, other useful products or companionship. This book is an essential text for students of veterinary medicine. This edition is for pre-clinical and clinical veterinary students in a comprehensive manner. Different chapters deal with bacteriology, mycology and virology. It is written by an expert with many years of teaching experience. The book provides concise descriptions of groups of microorganisms and the diseases which they cause. Microbial pathogens are discussed in separate sections which provide information on the more important features of each microorganism and its role in the pathogenesis of diseases of animals. Tables, illustrations, diagrams and flow diagrams in the book provide information in an easily assimilated format. This edition contains chapters on molecular diagnostics and on infectious conditions of the skin, cardiovascular system, urinary tract and musculoskeletal system. In addition, microbial diseases of wild animals living in captivity, or as members of the feral fauna are also considered. Studies of antimicrobial resistance are also included. Readers will find this text very valuable.



Veterinary Parasitology

Austin White

ISBN: 9781799601432 HB Price: \$ 249.95 Size: 7 × 10 Pages: 318 Year: 2020 Reprint Year: 2024

About the Book: Veterinary Parasitology gives an exceptional asset for understudies and rehearsing veterinarians on the most proficient method to perceive, analyze, and treat parasitic maladies in domesticated animals and buddy creatures. The book starts with a segment devoted to the essentials of veterinary parasitology and finishes with an area on the anticipation of parasitic contaminations, involving ongoing improvements in the comprehension of the pathogenesis and control of parasitic maladies. In the middle of, there are segments on significant parasitic diseases in domesticated animals, composed by the parasite operators helminths, protozoa, and arthropods in addition to an area on symptomatic parasitology. Composed basically to meet the prompt needs of veterinary understudies, this course reading diagrams the fundamental parasitological learning expected to support clinical practice.



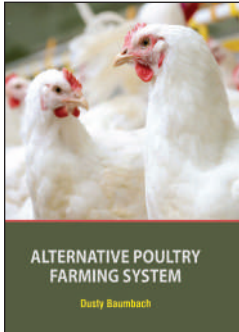
Veterinary Preventive Medicine

Alexander Jones

ISBN: 9781799601487 HB Price: \$ 185.00 Size: 7 × 10 Pages: 304 Year: 2020 Reprint Year: 2024

About the Book: Veterinary preventive medicine is a field of veterinary medicine that focuses on the prevention, control, and eradication of diseases that may affect both animals and humans. Preventive medicine veterinarians focus on the deterrence, regulation and cure for diseases, promotion of agricultural productivity, and improvement of the health of both animal and human populations. This unique work compiles the latest knowledge around veterinary medicine. Each chapter of the book describes all related aspects of animal health and disease. The book deals with the causes of diseases, the ways in which they develop and spread, and the principles of diseases control. The chapters in it give examples of the use of preventive medicine to control diseases of different types and factors, other than epidermiological ones, influence diseases control and control methods organized in different communities. This book has specifically been written for undergraduate students; however, it shall be beneficial for graduate students and teachers also. The language of the book has been kept simple to enable undergraduate students to understand the basic and applied aspects of Veterinary Preventive Medicine. Contents of the book are presented in a way so that students may obtain paramount benefit of it.



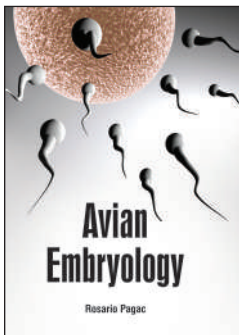


Alternative Poultry Farming System

Dusty Baumbach

ISBN: 9781799600701 HB Price: \$ 230.00 Size: 7 × 10 Pages: 296 Year: 2020 Reprint Year: 2024

About the Book: Alternative poultry production systems are seen as complementary to conventional poultry production, however there have been some issues where both conventional and alternative production systems have been unfairly criticised by one another. Ultimately the goal for the entire industry is one of cohesion between production systems so as to promote consumer confidence in poultry as a whole. Poultry farming means 'raising various types of domestic birds commercially for the purpose of meat, eggs and feather production'. The most common and widely raised poultry birds are chicken. About 5k million chickens are being raised every year as a source of food (both meat and eggs of chicken). The chickens which are raised for eggs are called layer chicken, and the chickens which are raised for their meat production are called broiler chickens. A poultry farm is where domesticated birds are raised. Poultry include chickens, turkey, ducks, and geese. These animals are raised for their meat and eggs. Chickens are the most common bird raised for both meat and eggs. Chickens that are raised for their meat are called broilers. Chickens that are raised for their eggs are called laying hens or layers. Some special breeds of poultry are raised for shows and competitions. The book is poultry farming, highlighting the attributes of poultry species and why it is a profitable venture. It traces the origin of poultry species and looks at them as a biological entity. Factors necessary for successful incubation, brooding, rearing and management of adult birds are discussed. The principles of poultry nutrition, record keeping and marketing are also covered. The course aims to develop entrepreneurial skills in poultry farming.



Avian Embryology

Rosario Pagac

ISBN: 9781799601265 HB Price: \$ 230.00 Size: 7 × 10 Pages: 344 Year: 2020 Reprint Year: 2024

About the Book: Birds reproduce by internal fertilization, during which the egg is fertilized inside the female. Bird reproduction starts the same way as in mammals by the joining of an egg or ovum with a sperm cell in the oviduct. The embryology of the bird is the development of the chicken inside of the egg. Hatchery managers need to be able to differentiate between normal and abnormal embryos and identify possible causes of embryo mortality during incubation. This edition will serve as the most complete and up-to-date guide to the use of the avian embryo in studies of vertebrate development. In this book emphasis has been placed on providing practical guidance, highlighting potentials and pitfalls of all key cell biological and embryological techniques. This volume discusses recent advances in avian biology that have caused this diverse field to re-emerge. This book describes the major events of embryonic development and considers the underlying mechanisms which result in the production of a viable hatchling. Chapters are written in the highly successful format avoiding known pitfalls. It explores a variety of approaches and different sauropsid models that will help facilitate communication and collaboration among researchers, which in turn will progress this field forward.

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