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Fundamental Of Plant Physiology - V. K. Jain
2000-10

Crop Physiology Case Histories for Major Crops - Victor Sadras 2020-12-05

Crop Physiology: Case Histories of Major Crops updates the physiology of broad-acre crops with a focus on the genetic, environmental and management drivers of development, capture and efficiency in the use of radiation, water and nutrients, the formation of yield and aspects of quality. These physiological process are presented in a double context of challenges and solutions. The challenges to increase plant-based food, fodder, fiber and energy against the backdrop of population increase, climate change, dietary choices and declining public funding for research and development in agriculture are unprecedented and urgent. The proximal technological solutions to these challenges are genetic improvement and agronomy. Hence, the premise of the book is that crop physiology is most valuable when it engages meaningfully with breeding and agronomy. With contributions from 92 leading scientists from around the world, each chapter deals with a crop: maize, rice, wheat, barley, sorghum and oat; quinoa; soybean, field pea, chickpea, peanut, common bean, lentil, lupin and faba bean; sunflower and canola; potato,

cassava, sugar beet and sugarcane; and cotton. A crop-based approach to crop physiology in a G x E x M context Captures the perspectives of global experts on 22 crops

Biology - Colleen M. Belk 2011-12-29

Coleen Belk and Virginia Borden Maier have helped students demystify biology for nearly twenty years in the classroom and nearly ten years with their book, *Biology: Science for Life with Physiology*. In the new Fourth Edition, they continue to use stories and current issues, such as discussion of cancer to teach cell division, to connect biology to student's lives. Learning Outcomes are new to this edition and integrated within the book to help professors guide students' reading and to help students assess their understanding of biology. A new Chapter 3, "Is It Possible to Supplement Your Way to Better Health? Nutrients and Membrane Transport," offers an engaging storyline and focused coverage on micro- and macro-nutrients, antioxidants, passive and active transport, and exocytosis and endocytosis. This package contains: *Biology: Science for Life with Physiology, Fourth Edition*

Agriscience - Elmer L. Cooper 1995

An agriscience textbook exploring such topics as environmental technology, plant sciences, integrated pest management, interior and exterior plantscape, animal sciences, food

science, and agribusiness.

University Botany- Iii : (Plant Taxonomy, Plant Embryology, Plant Physiology) - S.M. Reddy
2007

University Botany-Iii Is A Comprehensive Text Book For Students Of 3Rd Year B.Sc Botany. The Book Is Written Strictly In Accordance With Revised Common Core Syllabus Adopted By All The Universities In Andhra Pradesh. Every Care Has Been Taken To Present The Subject In A Simple Language And In A Profusely Illustrated Manner For Better Understanding. The Book Is Divided Into Three Parts.Part A Deals With The Morphology, Taxonomy And Economic Importance Of Different Families. It Also Deals With Basic Rules Of Nomenclature And Systems Of Classifications Of Angiosperm Plants. A Brief Account Of Modern Trends In Taxonomy And Basics Of Ethnobotany Are Also Given.Part B Deals With The Reproduction And Development Of Angiosperm Plants. Microsporogenesis And Megasporogenesis And Fertilization Are Discussed In Different Chapters. Brief Description Of Development Of Endosperm And Embryo Formed Sixth Seventh Chapters Respectively. An Introduction To Palynology With Special Reference To A Few Families Is Also Given.Part C Deals With The Plant Water Relations, Mineral Nutrition, Plant Metabolism With Respect To Photosynthesis, Respiration And Nitrogen Metabolism Are Given. Growth And Development Of Angiosperm Plant With Reference To Growth Substances And Light Are Discussed. Fruit Ripening, Seed Dormancy And Germination Also Formed This Part. Plant Life In Relation To Environmental Stress Is Given In Last Part Of This Section.

Plant Science - Hudson Thomas Hartmann 1981
Plants: structure, classification, growth, reproduction, and utilization; An overview of the fruit crops and ornamental plants;

Major agronomic, vegetable, and fruit crops.

Plants and People - Christopher Cumo
2015-10-05

An exploration of the relationship between plants and people from early agriculture to modern-day applications of biotechnology in crop production, Plants and People: Origin and Development of Human-Plant Science Relationships covers the development of agricultural sciences from Roman times through

the development of agricultural experiment station

Plant Pathology - George N. Agrios 2005-01-25

This fifth edition of the classic textbook in plant pathology outlines how to recognize, treat, and prevent plant diseases. It provides extensive coverage of abiotic, fungal, viral, bacterial, nematode and other plant diseases and their associated epidemiology. It also covers the genetics of resistance and modern management on plant disease. Plant Pathology, Fifth Edition, is the most comprehensive resource and textbook that professionals, faculty and students can consult for well-organized, essential information. This thoroughly revised edition is 45% larger, covering new discoveries and developments in plant pathology and enhanced by hundreds of new color photographs and illustrations. The latest information on molecular techniques and biological control in plant diseases Comprehensive in coverage Numerous excellent diagrams and photographs A large variety of disease examples for instructors to choose for their course

Symbiotic Nitrogen Fixation - P. Graham
2012-12-06

During the past three decades there has been a large amount of research on biological nitrogen fixation, in part stimulated by increasing world prices of nitrogen-containing fertilizers and environmental concerns. In the last several years, research on plant-microbe interactions, and symbiotic and asymbiotic nitrogen fixation has become truly interdisciplinary in nature, stimulated to some degree by the use of modern genetic techniques. These methodologies have allowed us to make detailed analyses of plant and bacterial genes involved in symbiotic processes and to follow the growth and persistence of the root-nodule bacteria and free-living nitrogen-fixing bacteria in soils. Through the efforts of a large number of researchers we now have a better understanding of the ecology of rhizobia, environmental parameters affecting the infection and nodulation process, the nature of specificity, the biochemistry of host plants and microsymbionts, and chemical signalling between symbiotic partners. This volume gives a summary of current research efforts and knowledge in the field of biological nitrogen fixation. Since the research field is diverse in

nature, this book presents a collection of papers in the major research area of physiology and metabolism, genetics, evolution, taxonomy, ecology, and international programs.

Principles of Seed Science and Technology -

Lawrence O. Copeland 2012-12-06

This Third Edition of *Principles of Seed Science and Technology*. like the first two editions. is written for the advanced undergraduate student or lay person who desires an introduction to the science and technology of seeds. The first eight chapters present the seed as an abiological system and cover its origin, development, composition, function (and sometimes nonfunction), performance and ultimate deterioration. The last seven chapters present the fundamentals of how seeds are produced, conditioned, evaluated and distributed in our modern agricultural society. A new chapter on seed enhancement has been added to reflect the significant advancements made in the last 10 years on new physiological and molecular biology techniques to further enhance seed performance. Because of the fundamental importance of seeds to both agriculture and to all of society, we have taken great care to present the science and technology of seeds with the respect and feeling this study deserves. We hope that this feeling will be communicated to our readers. Furthermore, we have attempted to present information in a straight-forward, easy-to-read manner that will be easily understood by students and lay persons alike. Special care has been taken to address both current state-of-the-art as well as future trends in seed technology. . We believe this Third Edition represents a new level in presenting information that appeals to advanced undergraduate students as well as to those desiring more fundamental information on seed form and function. At the same time, it continues to have the strengths of the first two editions. Its readability as well as its comprehensive coverage of the broader area of seed science and technology.

Blue Light Responses - Horst Senger 1987-04-30

Physiology E-Book - Linda S. Costanzo

2017-03-15

Renowned physiology instructor Dr. Linda Costanzo's friendly, logical, easy-to-follow

writing style makes *Physiology*, 6th Edition ideal for coursework and USMLE preparation. Well-designed figures and tables provide handy visuals for procedures or physiologic equations, and step-by-step explanations clarify challenging concepts. This full-color, manageably-sized text offers a comprehensive and consistent overview of core physiologic concepts at the organ system and cellular levels, making complex principles easy to understand. Information is presented in a short, simple, and focused manner - the perfect presentation for success in coursework and on exams. Chapter summaries and "Challenge Yourself" questions at the end of each chapter provide an extensive review of the material and reinforce understanding and retention. Equations and sample problems are integrated throughout the text. NEW! More Clinical Physiology Case Boxes relate to pathophysiology for a clinical context

Oxford Textbook of Global Public Health -

Roger Detels 2017

Sixth edition of the hugely successful, internationally recognised textbook on global public health and epidemiology, with 3 volumes comprehensively covering the scope, methods, and practice of the discipline

Principles of Plant Nutrition - Konrad Mengel (etc) 2001-07-31

Plant nutrition; The soil as a plant nutrient medium; Nutrient uptake and assimilation; Plant water relationships; Plant growth and crop production; Fertilizer application; Nitrogen; Sulphur; Phosphorus; Potassium; Calcium; Magnesium; Iron; Manganese; Zinc; Copper; Molybdenum; Boron; Further elements of importance; Elements with more toxic effects.

Plant Respiration - Hans Lambers 2006-03-30

Respiration in plants, as in all living organisms, is essential to provide metabolic energy and carbon skeletons for growth and maintenance. As such, respiration is an essential component of a plant's carbon budget. Depending on species and environmental conditions, it consumes 25-75% of all the carbohydrates produced in photosynthesis - even more at extremely slow growth rates. Respiration in plants can also proceed in a manner that produces neither metabolic energy nor carbon skeletons, but heat. This type of respiration involves the cyanide-resistant, alternative oxidase; it is unique to

plants, and resides in the mitochondria. The activity of this alternative pathway can be measured based on a difference in fractionation of oxygen isotopes between the cytochrome and the alternative oxidase. Heat production is important in some flowers to attract pollinators; however, the alternative oxidase also plays a major role in leaves and roots of most plants. A common thread throughout this volume is to link respiration, including alternative oxidase activity, to plant functioning in different environments.

Understanding Children's Development - Peter K. Smith 1998-01

Revised to take account of developments in the field, this edition includes new discussion of the major issues in current UK and European research as well as expanded coverage of the practical applications of this research.

Plant Physiology and Development - Lincoln Taiz 2022

Plant Physiology and Development incorporates the latest advances in plant biology, making *Plant Physiology* the most authoritative and widely used upper-division plant biology textbook. Up to date, comprehensive, and meticulously illustrated, the improved integration of developmental material throughout the text ensures that *Plant Physiology and Development* provides the best educational foundation possible for the next generation of plant biologists. This new, updated edition includes current information to improve understanding while maintaining the core structure of the book. Figures have been revised and simplified wherever possible. To eliminate redundancy, stomatal function (Chapter 10 in the previous edition) has been reassigned to other chapters. In addition, a series of feature boxes related to climate change are also included in this edition. An enhanced ebook with embedded self-assessment, Web Topics and Web Essays and Study Questions is available with this edition.

Essentials of Medical Physiology - K. Sembulingam 2008-10-01

This is a comprehensive, accessible text that covers the basic principles of Medical Physiology. It is completely up-to-date and includes information on the latest findings in physiology. The text has been beautifully

designed and illustrated, and chapters present information in an easy-to-follow and logical style.

Plant Physiology: Theory and Applications - S. L. Kochhar 2020-12-03

This edition provides a comprehensive overview of the rapidly advancing field of plant physiology, supplemented with experimental exercises.

Gods, Wasps and Stranglers - Mike Shanahan 2016

They are trees of life and trees of knowledge. They are wish-fulfillers rainforest royalty more precious than gold. They are the fig trees, and they have affected humanity in profound but little-known ways. *Gods, Wasps, and Stranglers* tells their amazing story.

Plant Physiology and Development - Lincoln Taiz 2015

Throughout its twenty-two year history, the authors of *Plant Physiology* have continually updated the book to incorporate the latest advances in plant biology and implement pedagogical improvements requested by adopters. This has made *Plant Physiology* the most authoritative, comprehensive, and widely used upper-division plant biology textbook. In the Sixth Edition, the Growth and Development section (Unit III) has been reorganized and expanded to present the complete life cycle of seed plants from germination to senescence. In recognition of this enhancement, the text has been renamed *Plant Physiology and Development*. As before, Unit III begins with updated chapters on Cell Walls and Signals and Signal Transduction. The latter chapter has been expanded to include a discussion of major signaling molecules, such as calcium ions and plant hormones. A new, unified chapter entitled Signals from Sunlight has replaced the two Fifth-Edition chapters on Phytochrome and Blue Light Responses. This chapter includes phytochrome, as well as the blue and UV light receptors and their signaling pathways, including phototropins, cryptochromes, and UVR8. The subsequent chapters in Unit III are devoted to describing the stages of development from embryogenesis to senescence and the many physiological and environmental factors that regulate them. The result provides students with an improved understanding of the integration of hormones and other signaling agents in

developmental regulation.

Plant Physiology - Lincoln Taiz 2006

This fourth edition provides the basics for introductory courses on plant physiology without sacrificing the more challenging material sought by upper division and graduate level students. Many new or revised figures and photographs, study questions and a glossary of key terms have been added.

Esau's Plant Anatomy - Ray F. Evert

2006-09-18

This revision of the now classic Plant Anatomy offers a completely updated review of the structure, function, and development of meristems, cells, and tissues of the plant body. The text follows a logical structure-based organization. Beginning with a general overview, chapters then cover the protoplast, cell wall, and meristems, through to phloem, periderm, and secretory structures. "There are few more iconic texts in botany than Esau's Plant Anatomy... this 3rd edition is a very worthy successor to previous editions..." ANNALS OF BOTANY, June 2007

Plant Physiology and Development - Lincoln

(University of California Taiz, Santa Cruz)

2018-03

Published by Sinauer Associates, an imprint of Oxford University Press. Throughout its twenty-two year history, the authors of Plant Physiology and Development have continually updated the book to incorporate the latest advances in plant biology and implement pedagogical improvements requested by adopters. This has made Plant Physiology and Development the most authoritative, comprehensive, and widely-used upper-division plant biology textbook.

Photosynthesis - David W. Lawlor 1993

Provides a simplified description of the partial process of photosynthesis at the molecular, organelle, cell and organ levels of organization in plants, which contribute to the complete process. It surveys effects of global environmental change, carbon dioxide enrichment and ozone depletion.

Plant Physiological Ecology - Hans Lambers

2008-10-08

Box 9E. 1 Continued FIGURE 2. The C-S-R triangle model (Grime 1979). The strategies at the three corners are C, competi- winning species; S, stress-tolerating s- cies;

R, ruderal species. Particular species can engage in any mixture of these three primary strategies, and the mixture is described by their position within the triangle. comment briefly on some other dimensions that Grime's (1977) triangle (Fig. 2) (see also Sects. 6. 1 are not yet so well understood. and 6. 3 of Chapter 7 on growth and allocation) is a two-dimensional scheme. A C—S axis (Com- tition-winning species to Stress- tolerating spe- Leaf Economics Spectrum cies) reflects adaptation to favorable vs. unfavorable sites for plant growth, and an R- Five traits that are coordinated across species are axis (Ruderal species) reflects adaptation to leaf mass per area (LMA), leaf life-span, leaf N disturbance. concentration, and potential photosynthesis and dark respiration on a mass basis. In the five-trait Trait-Dimensions space, 79% of all variation worldwide lies along a single main axis (Fig. 33 of Chapter 2A on photo- A recent trend in plant strategy thinking has synthesis; Wright et al. 2004). Species with low been trait-dimensions, that is, spectra of varia- LMA tend to have short leaf life-spans, high leaf tion with respect to measurable traits. Compared nutrient concentrations, and high potential rates of mass-based photosynthesis. These species with category schemes, such as Raunkiaer's, trait occur at the "quick-return" end of the leaf e- dimensions have the merit of capturing con- nomics spectrum.

Plant Physiology, Development and Metabolism -

Satish C Bhatla 2018-12-06

This book focuses on the fundamentals of plant physiology for undergraduate and graduate students. It consists of 34 chapters divided into five major units. Unit I discusses the unique mechanisms of water and ion transport, while Unit II describes the various metabolic events essential for plant development that result from plants' ability to capture photons from sunlight, to convert inorganic forms of nutrition to organic forms and to synthesize high energy molecules, such as ATP. Light signal perception and transduction works in perfect coordination with a wide variety of plant growth regulators in regulating various plant developmental processes, and these aspects are explored in Unit III. Unit IV investigates plants' various structural and biochemical adaptive mechanisms to enable them to survive under a wide variety of

abiotic stress conditions (salt, temperature, flooding, drought), pathogen and herbivore attack (biotic interactions). Lastly, Unit V addresses the large number of secondary metabolites produced by plants that are medicinally important for mankind and their applications in biotechnology and agriculture. Each topic is supported by illustrations, tables and information boxes, and a glossary of important terms in plant physiology is provided at the end.

Plant Physiology - Lincoln Taiz 2010

"Plant Physiology, Fifth Edition continues to set the standard for textbooks in the field, making plant physiology accessible to virtually every student. Authors Lincoln Taiz and Eduardo Zeiger have again collaborated with a stellar group of contributing plant biologists to produce a current and authoritative volume that incorporates all the latest findings. Changes for the new edition include: A newly updated chapter (Chapter 1) on Plant Cells, including new information on the endomembrane system, the cytoskeleton, and the cell cycle, A new chapter (Chapter 2) on Genome Structure and Gene Expression, A new chapter (Chapter 14) on Signal Transduction. Updates on recent developments in the light reactions and the biochemistry of photosynthesis, respiration, ion transport, and water relations. In the phytochrome, blue-light, hormone and development chapters, new information about signaling pathways, regulatory mechanisms, and agricultural applications. Coverage of recent breakthroughs on the control of flowering. Three new Appendices on Concepts of Bioenergetics, Plant Kinematics, and Hormone Biosynthetic Pathways As with prior editions, the Fifth Edition is accompanied by a robust Companion Website. New material has been added here as well, including new Web Topics and Web Essays."--P. 4 de la couv.

Biochemistry and Molecular Biology of Plants - Bob B. Buchanan 2015-08-31

With over 1000 original drawings and 500 photographs, this work offers complete coverage of cell biology, plant physiology and molecular biology.

Plant Physiology - Lincoln Taiz 2002-01-01

This third edition provides the basics for introductory courses on plant physiology without

sacrificing the more challenging material sought by upper division and graduate level students. The text contains many new or revised figures and photographs, all in full colour. A website, referenced throughout the text, includes additional study questions, WebTopics (elaborating on selected topics discussed in the text), WebEssays (discussions of cutting edge research topics, written by those who did the work) and additional suggestions for further reading. Key pedagogical changes to the text result in a shorter book. Advanced material from the second edition has been removed and posted at an affiliated Web site, while many new or revised figures and photographs, study questions and a glossary of key terms have been added. Despite the streamlining of the text, the third edition incorporates all the important developments in plant physiology, especially in cell, molecular and developmental biology.

Sunflower - Enrique Martínez-Force 2015-04-15

This comprehensive reference delivers key information on all aspects of sunflower. With over 20 chapters, this book provides an extensive review of the latest developments in sunflower genetics, breeding, processing, quality, and utilization; including food, energy and industrial bioproduct applications. World-renowned experts in this field review U.S. and international practices, production, and processing aspects of sunflower. Presents seven chapters on improving sunflower production with insights on breeding and genetics; physiology and agronomy; common insect and bird pests; mutagenesis; and identifying and preventing diseases. Summarizes current knowledge of sunflower oil uses in food, oxidative stability, minor constituents, and lipids biosynthesis. Ideal reference for scientists, researchers, and students from across industry, academia, and government.

Botany: An Introduction to Plant Biology - James D. Mauseth 2019-09-26

Botany: An Introduction to Plant Biology, Seventh Edition provides a modern and comprehensive overview of the fundamentals of botany while retaining the important focus of natural selection, analysis of botanical phenomena, and diversity.

Principles of Development - Lewis Wolpert 2015

Introduction to Plant Physiology - William G. Hopkins 2004

Cells, tissues, and organs: the architecture of plants; The plant cell building blocks: lipids, proteins, and carbohydrates; Lipids are a class of molecules that includes fats, oils, sterols, and pigments; Proteins play a central role in the biochemistry of cells and are responsible for virtually all the properties of life as we know it; Carbohydrates are the most abundant class of biological molecules; Biological membranes; The membrane lipid forms a bilayer, a highly fluid but very stable structure; Membranes contain significant amounts of protein; Cellular organelles; Most mature plant cells contain a large, central vacuole; The nucleus is the information center of the cell; The endoplasmic reticulum and golgi apparatus are centers of membrane biosynthesis and secretory activities; The mitochondrion is the principal site of cellular respiration; Plastids are a family of organelles with a variety of functions; Microbodies are metabolically very active; Cytoskeleton the extracellular matrix; The primary cell wall is a flexible network of cellulose microfibrils and cross-linking glycans; The cellulose-glycan lattice is embedded in a matrix of pectin and protein; Cellulose microfibrils are assembled at the plasma membrane as they are extruded into the cell wall; The secondary cell wall is deposited on the inside of the primary wall in maturing cells; Plasmodesmata are cytoplasmic channels extend through the wall to connect the protoplasts of adjacent cells; Tissues and organs; Tissues are groups of cells that form organized, functional unit; Meristems are regions of perpetually dividing cells; Parenchyma is the most abundant living tissue in plants; Supporting tissues are distributed throughout the primary and secondary plant bodies; Vascular tissues are the principal conducting tissues for water and nutrients ; Epidermis is a superficial tissue that forms a continuous layer over the surface of the primary; Plant body; Plant organs; Roots anchor the plant and absorb water and minerals from the soil.

Biochemistry of Lipids, Lipoproteins and Membranes - Neale Ridgway 2015-07-24
Biochemistry of Lipids: Lipoproteins and Membranes, Volume Six, contains concise

chapters that cover a wide spectrum of topics in the field of lipid biochemistry and cell biology. It provides an important bridge between broad-based biochemistry textbooks and more technical research publications, offering cohesive, foundational information. It is a valuable tool for advanced graduate students and researchers who are interested in exploring lipid biology in more detail, and includes overviews of lipid biology in both prokaryotes and eukaryotes, while also providing fundamental background on the subsequent descriptions of fatty acid synthesis, desaturation and elongation, and the pathways that lead the synthesis of complex phospholipids, sphingolipids, and their structural variants. Also covered are sections on how bioactive lipids are involved in cell signaling with an emphasis on disease implications and pathological consequences. Serves as a general reference book for scientists studying lipids, lipoproteins and membranes and as an advanced and up-to-date textbook for teachers and students who are familiar with the basic concepts of lipid biochemistry. References from current literature will be included in each chapter to facilitate more in-depth study. Key concepts are supported by figures and models to improve reader understanding. Chapters provide historical perspective and current analysis of each topic.

Concepts of Biology - Samantha Fowler
2018-01-07

Concepts of Biology is designed for the single-semester introduction to biology course for non-science majors, which for many students is their only college-level science course. As such, this course represents an important opportunity for students to develop the necessary knowledge, tools, and skills to make informed decisions as they continue with their lives. Rather than being mired down with facts and vocabulary, the typical non-science major student needs information presented in a way that is easy to read and understand. Even more importantly, the content should be meaningful. Students do much better when they understand why biology is relevant to their everyday lives. For these reasons, Concepts of Biology is grounded on an evolutionary basis and includes exciting features that highlight careers in the biological sciences and everyday applications of the concepts at

hand. We also strive to show the interconnectedness of topics within this extremely broad discipline. In order to meet the needs of today's instructors and students, we maintain the overall organization and coverage found in most syllabi for this course. A strength of Concepts of Biology is that instructors can customize the book, adapting it to the approach that works best in their classroom. Concepts of Biology also includes an innovative art program that incorporates critical thinking and clicker questions to help students understand--and apply--key concepts.

Plant Physiology, Development and

Metabolism - Satish C Bhatla 2018-11-28

This book focuses on the fundamentals of plant physiology for undergraduate and graduate students. It consists of 34 chapters divided into five major units. Unit I discusses the unique mechanisms of water and ion transport, while Unit II describes the various metabolic events essential for plant development that result from plants' ability to capture photons from sunlight, to convert inorganic forms of nutrition to organic forms and to synthesize high energy molecules, such as ATP. Light signal perception and transduction works in perfect coordination with a wide variety of plant growth regulators in regulating various plant developmental processes, and these aspects are explored in Unit III. Unit IV investigates plants' various structural and biochemical adaptive mechanisms to enable them to survive under a wide variety of abiotic stress conditions (salt, temperature, flooding, drought), pathogen and herbivore attack (biotic interactions). Lastly, Unit V addresses the large number of secondary metabolites produced by plants that are medicinally important for mankind and their applications in biotechnology and agriculture. Each topic is supported by illustrations, tables and information boxes, and a glossary of important terms in plant physiology is provided at the end.

Botany - James D. Mauseth 2016-07-06

The Sixth Edition of Botany: An Introduction to Plant Biology provides a modern and comprehensive overview of the fundamentals of botany while retaining the important focus of natural selection, analysis of botanical phenomena, and diversity.

On the Economy of Plant Form and Function

- Cabot Symposium (6, 1983, Petersham, Mass.)
1986-08-29

This book summarizes the major recent advances in the economic analysis of plant behavior.

Environmental Plant Physiology - Vir Singh
2020-01-23

Magnitude and quality of life as well as sustainable human progress inescapably depend on the state of our environment. The environment, in essence, is a common resource of all the living organisms in the biosphere as well as a vivacious basis of the evolution of life on Earth. A sustainable future broods over a sustainable environment—an environment encompassing life-originating, life-supporting, and life-sustaining uniqueness. A deteriorating environment haplessly sets in appalling conditions leading to shrinkage of life and a halt in human progress. The current global environment scenario is extremely dismal. Environmental disruptions, largely owing to anthropogenic activities, are steadily leading to awful climate change. Horribly advancing toward mass extinction in the near or distant future and posing a threat to our Living Planet, the unabatedly ongoing climate change, in fact, is an unprecedented issue of human concern about life in the recorded human history. How to get rid of the environmental mess and resolve environmental issues leading to climate change mitigation is the foremost challenge facing humanity in our times. There are several measures the whole world is resorting to. They are primarily focused on cutting down excessive carbon emissions by means of development of technological alternatives, for example, increasing mechanical efficiencies and ever-more dependence on clean-energy sources. These are of great importance, but there is yet a natural phenomenon that has been, and will unceasingly be, pivotal to maintain climate order of the Earth. For it to phenomenally boost, we need to explore deeper aspects of environmental science. It is the environmental plant physiology that links us with deeper roots of life. Environmental Plant Physiology: Botanical Strategies for a Climate-Smart Planet attempts to assimilate a relatively new subject that helps us understand the very phenomenon of life that

persists in the planet's environment and depends on, and is influenced by, a specific set of operating environmental factors. It is the subject that helps us understand adaptation mechanisms within a variety of habitats as well as the implications of the alterations of environmental factors on the inhabiting organisms, their populations, and communities. Further, this book can also be of vital importance for policy makers and organizations dealing with climate-related issues and committed to the cause of the earth. This book

can be instrumental in formulating strategies that can lead us to a climate-smart planet. Features: • Provides ecological basis of environmental plant physiology • Discusses energy, nutrient, water, temperature, allelochemical, and altitude relations of plants • Reviews stress physiology of plants and plants' adaptations to the changing climate • Examines climate-change effects on plant physiology • Elucidates evolving botanical strategies for a climate-smart planet