Plant Physiology And Development By Taiz And Ziger 6th Edition Dowload

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Plant Physiology and Development Sinauer Associates Incorporated
Physiology of Plants and Their Cells is a 20-chapter book introducing the field of plant physiology. Plant physiology is generally a study of the living activity of the plant. This book begins by elucidating the value of plants to man, and describing the plant cells including its classification, structure, and nutrition. Subsequent chapters explain the role of water, minerals, and photosynthesis in plant physiology. Other topics on plants underlined in this book include energy storage, utilization, and loss; amino acid synthesis; metabolism; proteins; enzymes; phytochemistry; membranes; intercellular communication; growth; longevity; senescence; and death. Lastly, the relevance of plant physiology to contemporary problems facing mankind is explained. This book will be useful as a general reference for teachers and scientists interested in certain aspects of the field, as well as for students of biology and agriculture.
Plant Physiology and Development Springer Science & Business Media
The field of plant physiology includes the study of all chemical and physical processes of plants, from the molecular-level interactions of photosynthesis and the diffusion of water, minerals, and nutrients within the plant, to the larger-scale processes of plant growth, dormancy and reproduction. This new book covers a broad array of topics within the field. Plant Physiology focuses on the study of the internal activities of plants, including research into the molecular interactions of photosynthesis and the internal diffusion of water, minerals, and nutrients. Also included are investigations into the processes of plant development, seasonality, dormancy, and reproductive control. The chapters focus on various aspects of plant physiology, including phytochemistry; interactions within a plant between cells, issues, and organs; ways in which plants regulate their internal functions; and how plants respond to conditions and variations within the environment. Given the environmental crises brought about by pollution and climate change, this is a particularly vital area of study, since stress from water loss, changes in air chemistry, or crowding by other plants can lead to changes in the way a plant function. Readers of this book will gain the information they need to stay current with the latest research being done in this essential field of study.
Fundamentals of Plant Physiology CRC Press
Plant Physiology: A Treatise, Volume VIA: Physiology of Development: Plants and Their Reproduction explores the various problems of development and reproduction that arise as plants, responsive to environmental stimuli, develop a vegetative plant body and produce seeds and fruits or organs of perennation. This book considers the morphological aspects of plant growth and development as well as the growth and reproduction of fungi, physiological aspects of vegetative reproduction and flowering, and perennation and dormancy. This volume is organized into four chapters and begins with an overview of growth and development, with reference to organization and patterns of development in vascular plants and the initiation and development of plants. The discussion then shifts to vegetative, sexual, and asexual reproduction in fungi, along with heterokaryosis and morphogenesis. The next chapter explores reproduction in plant biology, focusing on vegetative and sexual reproduction, sex determination, and photoperiodism. This book concludes by considering the physiological mechanisms underlying the production of organs of perennation and the establishment of dormancy. This text will be of value both to graduate students and to established investigators with specific interest in plant physiology.
Plant Physiology: Theory and Applications Cambridge University Press
Woody plants such as trees have a significant economic and climatic influence on global economies and ecologies. This completely revised classic book is an up-to-date synthesis of the intensive research devoted to woody plants published in the second edition, with additional important aspects from the authors' previous book, Growth Control in Woody Plants. Intended primarily as a reference for researchers, the interdisciplinary nature of the book makes it useful to a broad range of scientists and researchers from agroforesters, agronomists, and arborists to plant pathologists and soil scientists. This third edition provides crutial updates to many chapters, including: responses of plants to elevated CO2; the process and regulation of cambial growth; photoinhibition and photoprotection of photosynthesis; nitrogen metabolism and internal recycling, and more. Revised chapters focus on emerging discoveries of the patterns and processes of woody plant physiology. * The only book to provide recommendations for the use of specific management practices and experimental procedures and equipment *Updated coverage of nearly all topics of interest to woody plant physiologists * Extensive revisions of chapters relating to key processes in growth, photosynthesis, and water relations * More than 500 new references * Examples of molecular-level evidence incorporated in discussion of the role of expansion proteins in plant growth; mechanism of ATP production by coupling factor in photosynthesis; the role of cellulose synthase in cell wall construction; structure-function relationships for aquaporin proteins
Plant Physiology Springer Science & Business Media
Herbicides make a spectacular contribution to modern crop production. Yet, for the development of more effective and safer agrochemicals, it is essential to understand how these compounds work in plants and their surroundings. This expanded and fully revised second edition of Herbicides and Plant Physiology provides a comprehensive and up-to-date account of how modern herbicides interact with target plants, and how they are used to manage crop production. In addition, the text: Provides a current account of the importance of weeds to crop yield and quality; Describes how new herbicides are discovered and developed; Examines precise sites of herbicide action and mechanisms of herbicide selectivity and resistance; Reviews commercial and biotechnological applications, including genetically engineered herbicide resistance in crops; Suggests new areas for future herbicide development; Includes many specially prepared illustrations. As a summary of diverse research information, this second edition of Herbicides and Plant Physiology is a valuable reference for students and researchers in plant physiology, crop production/protection, plant biochemistry, biotechnology and agriculture. All libraries in universities, agricultural colleges and research establishments where these subjects are studied and taught will need copies of this excellent book on their shelves.
Plant Physiology Springer
Plant Physiology and Development
Plant Physiology Elsevier
"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.
Introduction to Plant Physiology Academic Press
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.

Plant Physiology 7A John Wiley & Sons

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.

Introduction to Plant Physiology Springer Science & Business Media

Over recent years, progress in micropropagation has not been as rapid as many expected and, even now, relatively few crops are produced commercially. One reason for this is that the biology of material growing in vitro has been insufficiently understood for modifications to standard methods to be made based on sound physiological principles. However, during the past decade, tissue culture companies and others have invested considerable effort to reduce the empirical nature of the production process. The idea of the conference `Physiology, Growth and Development of Plants and Cells in Culture' (Lancaster, 1992) was to introduce specialists in different areas of plant physiology to micropropagators, with the express aims of disseminating as wide a range of information to as large a number of participants as possible, and beginning new discussions on the constraints and potentials affecting the development of in vitro plant production methods. This book is based on presentations from the conference and has been divided into two main sections, dealing with either aspects of the in vitro environment -- light, nutrients, water, gas -- or with applied aspects of the culture process -- morphogenesis, acclimation, rejuvenation, contamination.

Physiology of Development Sinauer Associates Incorporated

In recent years, molecular biology has infiltrated into all branches of botany. This is particularly true of plant physiology. This book attempts to provide an introduction to the metabolic and developmental physiology of higher plants from a molecular biological point of view. Starting from the heterocatalytic function of DNA the first ten chapters deal with metabolism; development is presented in the last nine, starting from the autocatalytic functions of DNA and including certain topics oriented more toward metabolic physiology. Both fields of plant physiology are so closely linked that an in tegrated presen tation of this kind seemed not only possible but desirable. In contrast to other accounts, an attempt has been made to give equal weight to metabolism and development. In particular, the so-called "sec ondary" plant materials, which are of considerable interest to the phar macist, the nutrition technologist, the plant breeder, and the agriculturalist, as well as to the biologist, are treated sufficiently. It is ob vious that the wealth of material made an illustrative style of presentation necessary. The book is intended for beginners, and so it has had, in part, to be simplified. Even so it has not been possible to write it without mentioning hypotheses that anticipate much more research. The beginner ought also to learn how working hypotheses are first postulated on the basis of cer tain facts and then must either be proved or refuted.

Herbicides and Plant Physiology CRC Press

This updated and much revised third edition of Seeds: Physiology of Development, Germination and Dormancy provides a thorough overview of seed biology and incorporates much of the progress that has been made during the past fifteen years. With an emphasis on placing information in the context of the seed, this new edition includes recent advances in the areas of molecular biology of development and germination, as well as fresh insights into dormancy, ecophysiology, desiccation tolerance, and longevity. Authored by preeminent authorities in the field, this book is an invaluable resource for researchers, teachers, and students interested in the diverse aspects of seed biology.

Plant Physiology Elsevier

A condensed version of the best-selling Plant Physiology and Development, this fundamentals version is intended for courses that focus on plant physiology with little or no coverage of development. Concise yet comprehensive, this is a distillation of the most important principles and empiricalfindings of plant physiology.

Plant Physiology and Development Springer Nature

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

Plant physiology Elsevier

Biochemistry and Physiology oj Plant Hormones is intended primarily as a textbook or major reference for a one-term intermediate-level or advanced course dealing with hormonal regulation of growth and development of seed plants for students majoring in biology, botany, and applied botany fields such as agronomy, forestry, and horticulture. Additionally, it should be useful to others who wish to become familiar with the topic in relation to their principal student or professional interests in related fields. It is assumed that readers will have a background in fundamental biology, plant physiology, and biochemistry. The dominant objective of Biochemistry and Physiology oj Plant Hor mones is to summarize, in a reasonably balanced and comprehensive way, the current state of our fundamental knowledge regarding the major kinds of hormones and the phytochrome pigment system. Written primarily for students rather than researchers, the book is purposely brief. Biochemical aspects have been given priority intentionally, somewhat at the expense of physiological considerations. There are extensive citations of the literature-both old and recent-but, it is hoped, not so much documentation as to make the book difficult to read. The specific choices of publications to cite and illustrations to present were made for different reasons, often to illustrate historical develop ment, sometimes to illustrate ideas that later proved invalid, occasionally to exemplify conflicting hypotheses, and most often to illustrate the current state of our knowledge about hormonal phenomena.

Plant Physiology, Development and Metabolism Springer Science & Business Media

With contributions from over 70 international experts, this reference provides comprehensive coverage of plant physiological stages and processes under both normal and stressful conditions. It emphasizes environmental factors, climatic changes, developmental stages, and growth regulators as well as linking plant and crop physiology to the production of food, feed, and medicinal compounds. Offering over 300 useful tables, equations, drawings, photographs, and micrographs, the book covers cellular and molecular aspects of plant and crop physiology, plant and crop physiological responses to heavy metal concentration and agrichemicals, computer modeling in plant physiology, and more.

Plant physiology Sinauer Associates, Incorporated

In this comprehensive and stimulating text and reference, the authors have succeeded in combining experimental data with current hypotheses and theories to explain the complex physiological functions of plants. For every student, teacher and researcher in the plant sciences it offers a solid basis for an in-depth understanding of the entire subject area, underpinning up-to-date research in plant physiology. The authors vividly explain current research by references to experiments, they cite original literature in figures and tables, and, at the end of each chapter, list recent references that are relevant for a deeper analysis of the topic. In addition, an abundance of detailed and informative illustrations complement the text.

Biochemistry and Physiology of Plant Hormones Benjamin-Cummings Publishing Company

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.

Plant Physiology Springer Science & Business Media

Textbook, concepts, experimental data.

Handbook of Plant and Crop Physiology Academic Press

This book aims to emphasize on basic concepts of plant growth, acclimation, and their adaptation to environment in changing conditions. The book will provide an updated perspective on the physical/mechanical stress, including biotic and abiotic stress, and induced responses in higher plants. This volume will also include a view of the stress recognition by plants and the cell signaling events triggered as a consequence, and will also address an appraisal of the plant oxidative stress metabolism under those circumstances. The book will explore how soil minerals and microbes are affecting plant growth, including elicitors and novel compounds which stimulate plant growth and the defence mechanisms issued by plants. This volume will also cover an overview on the enzymes which may regulate plant growth, as well as the evidences of the involvement of phytohormones and other signalling molecules in plant growth.