1. Record Nr. UNINA9910777492303321

Autore	Pallardy Stephen G
Titolo	Physiology of woody plants [[electronic resource] /] / Stephen G. Pallardy
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Elsevier, c2008
ISBN	1-281-30724-6 9786611307240 0-08-056871-8
Edizione	[3rd ed.]
Descrizione fisica	1 online resource (469 p.)
Altri autori (Persone)	KozlowskiT. T <1917-> (Theodore Thomas)
Disciplina	571.2
Soggetti	Woody plants - Physiology Trees - Physiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Rev. ed. of: Physiology of woody plants / Theodore T. Kozlowski, Stephen G. Pallardy. 2nd ed. c1997.
Nota di bibliografia	Includes bibliographical references (p. 379-440) and index.
Nota di contenuto	Front cover; PHYSIOLOGY OF WOODY PLANTS; Copyright page; Table of contents; Preface; Chapter 1: Introduction; HEREDITARY AND ENVIRONMENTAL REGULATION OF GROWTH; PHYSIOLOGICAL REGULATION OF GROWTH; PROBLEMS OF FORESTERS, HORTICULTURISTS, AND ARBORISTS; SUMMARY; Chapter 2: The Woody Plant Body; INTRODUCTION; CROWN FORM; STEM FORM; VEGETATIVE ORGANS AND TISSUES; LEAVES; STEMS; WOOD STRUCTURE OF GYMNOSPERMS; WOOD STRUCTURE OF ANGIOSPERMS; BARK; ROOTS; REPRODUCTIVE STRUCTURES; SUMMARY; Chapter 3: Vegetative Growth; INTRODUCTION; CELL AND TISSUE GROWTH; DORMANCY; SHOOT GROWTH SHOOT TYPES AND GROWTH PATTERNSSHOOT GROWTH IN THE TROPICS; CAMBIAL GROWTH; ROOT GROWTH; SHEDDING OF PLANT PARTS; MEASUREMENT AND ANALYSIS OF GROWTH; SUMMARY; Chapter 4: Reproductive Growth; INTRODUCTION; SEXUAL REPRODUCTION IN ANGIOSPERMS; SEXUAL REPRODUCTION IN GYMNOSPERMS; MATURATION OF SEEDS; ABSCISSION OF REPRODUCTIVE STRUCTURES; SUMMARY; Chapter 5: Photosynthesis; INTRODUCTION; CHLOROPLAST DEVELOPMENT AND STRUCTURE; THE PHOTOSYNTHETIC MECHANISM; CARBON DIOXIDE UPTAKE BY PHOTOSYNTHETIC TISSUES; CARBON AND

OXYGEN ISOTOPE DISCRIMINATION DURING PHOTOSYNTHESIS
VARIATIONS IN RATES OF PHOTOSYNTHESISENVIRONMENTAL FACTORS; WATER SUPPLY; PLANT FACTORS; SUMMARY; Chapter 6: Enzymes, Energetics, and Respiration; INTRODUCTION; ENZYMES AND ENERGETICS; RESPIRATION; ATP; RESPIRATION OF PLANTS AND PLANT PARTS; FACTORS AFFECTING RESPIRATION; ASSIMILATION; SUMMARY; Chapter 7: Carbohydrates; INTRODUCTION; KINDS OF CARBOHYDRATES; CARBOHYDRATE TRANSFORMATIONS; USES OF CARBOHYDRATES; ACCUMULATION OF CARBOHYDRATES; AUTUMN COLORATION; SUMMARY; Chapter 8: Lipids, Terpenes, and Related Substances; INTRODUCTION; LIPIDS; WAXES, CUTIN, AND SUBERIN; INTERNAL LIPIDS
ISOPRENOIDS OR TERPENOIDSSUMMARY; Chapter 9: Nitrogen Metabolism; INTRODUCTION; DISTRIBUTION AND SEASONAL FLUCTUATIONS OF NITROGEN; IMPORTANT NITROGEN COMPOUNDS; NITROGEN REQUIREMENTS; SOURCES OF NITROGEN; THE NITROGEN CYCLE; SUMMARY; Chapter 10: Mineral Nutrition; INTRODUCTION; FUNCTIONS OF MINERAL NUTRIENTS AND EFFECTS OF DEFICIENCIES; ACCUMULATION AND DISTRIBUTION OF MINERAL NUTRIENTS; MINERAL CYCLING; THE SOIL MINERAL POOL; LOSSES OF MINERAL NUTRIENTS FROM ECOSYSTEMS; ABSORPTION OF MINERAL NUTRIENTS; SUMMARY; Chapter 11: Absorption of Water and Ascent of Sap; INTRODUCTION
ABSORPTION OF WATERWATER ABSORPTION PROCESSES; ROOT AND STEM PRESSURES; ASCENT OF SAP; THE WATER CONDUCTING SYSTEM; SUMMARY; Chapter 12: Transpiration and Plant Water Balance; INTRODUCTION; FACTORS AFFECTING TRANSPIRATION; INTERACTION OF FACTORS AFFECTING TRANSPIRATION; TRANSPIRATION RATES; WATER LOSS FROM PLANT STANDS; THE WATER BALANCE; EFFECTS OF WATER STRESS; ADAPTATION TO DROUGHT; SUMMARY; Chapter 13: Plant Hormones and Other Signaling Molecules; INTRODUCTION; MAJOR CLASSES OF PLANT HORMONES; OTHER REGULATORY COMPOUNDS; MECHANISMS OF HORMONE ACTION; SUMMARY; Bibliography; Index

Sommario/riassunto

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 s