CONTENTS OF PREVIOUS VOLUMES

Historical Introduction—F. C. Steward

Volume IA. CELLULAR ORGANIZATION AND RESPIRATION
The Plant Cell and Its Inclusions—R. Brown
Proteins, Enzymes, and the Mechanism of Enzyme Action—Birgit Vennessland
Cellular Respiration—David R. Goddard and Walter D. Bonner

Volume IB. PHOTOSYNTHESIS AND CHEMOSYNTHESIS
Energy Storage: Photosynthesis—Hans Gaffron
Chemosynthesis: The Energy Relations of Chemoautotrophic Organisms—Martin Gibbs and Jerome A. Schiff

Volume II. PLANTS IN RELATION TO WATER AND SOLUTES
Cell Membranes: Their Resistance to Penetration and Their Capacity for Transport—Runar Collander
Water Relations of Cells—T. A. Benet-Clark
The Water Relations to Stomatal Cells and the Mechanisms of Stomatal Movement—O. V. S. Heath
Plants in Relation to Inorganic Salts—F. C. Steward and J. F. Sutcliffe
Translocation of Organic Solutes—C. A. Swanson
Translocation of Inorganic Solutes—O. Biddulph
Transpiration and the Water Economy of Plants—Paul J. Kramer

Volume III. INORGANIC NUTRITION OF PLANTS
Mineral Nutrition of Plants in Soils and in Culture Media—C. Bould and E. J. Hewitt
The Essential Nutrient Elements: Requirements and Interactions in Plants—E. J. Hewitt
Inorganic Nutrient Nutrition of Microorganisms—D. J. D. Nicholas
Modes of Action of the Essential Mineral Elements—Alvin Nason and William D. McElroy
Biological Nitrogen Fixation—Artturi I. Virtanen and Jorma K. Miettinen
Microbial Activities of Soil as They Affect Plant Nutrition—J. H. Quastel
CONTENTS OF PREVIOUS VOLUMES

Volume IVA. METABOLISM: ORGANIC NUTRITION AND NITROGEN METABOLISM

Introduction: The Concept of Metabolism—F. C. Steward
Photosynthesis (Carbon Assimilation): Environmental and Metabolic Relationships—Moyer D. Thomas
Micrometeorology and the Physiology of Plants in Their Natural Environment—Edgar Lemon
The Respiration of Plants and Their Organs—E. W. Yemm
The Respiration of Bulky Organs—Dorothy F. Forward
Metabolism of Nitrogenous Compounds—F. C. Steward and D. B. Durzan

Volume IVB. METABOLISM: INTERMEDIARY METABOLISM AND PATHOLOGY

Carbohydrates: Their Role in Plant Metabolism and Nutrition—Martin Gibbs
Metabolism of the Organic Acids—H. Beevers, M. L. Stiller, and V. S. Butt
The Plant Lipids—V. S. Butt and H. Beevers
The Physiology of Parasitic Disease—E. G. Bollard and R. E. F. Matthews

Volume VA. ANALYSIS OF GROWTH: BEHAVIOR OF PLANTS AND THEIR ORGANS

The Quantitative Analysis of Growth—F. J. Richards
Phyllotaxis: A Problem of Growth and Form—F. J. Richards and W. W. Schwabe
Tropic, Nastic, and Tactic Responses—Nigel G. Ball
Chemical Plant Growth Regulation—R. L. Wain and C. H. Fawcett
Environmental Factors in Regulation of Growth and Development: Ecological Factors—F. W. Went and Lillian Overland Sheps