
J. Benton Jones, Jr., CRC Press/Taylor & Francis Group, 6000 Broken Sound Pkwy. NW, Suite 300, Boca Raton, FL 33487-7274. $79.95. ISBN number: 978-1-4398-1609-7 (Paperback)

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The Plant Nutrition and Soil Fertility Manual, Second edition, is a worthy successor to the previous version: Plant Nutrition Manual published in 1998 (Jones, 1998). In the 2nd edition, the author has integrated many relevant parts from two of his other books: Agronomic Handbook: Management of Crops, Soils and Their Fertility (Jones, 2003) and Hydroponics: A practical guide for the Soilless Grower (Jones, 2000) as well as covering additional topics and updating the previous version. This new edition is a well-organized book providing a comprehensive discussion on topics related to plant nutrition and soil fertility. This is a result of Dr. Jones’ years of experience working with growers, crop consultants/advisors, fertilizer dealers, and soil testing laboratories.

The author’s has a concise and easy to understand writing style and his emphasis on the relevant information on each topic make this an excellent contribution. The book has a total of 27 chapters that have been divided into seven sections. Each chapter contains diagrams, tables, and texts in bullet list system to supplement and clarify the text. Section I-Introduction and Basic Principles contains five chapters. In this section the author emphasizes the importance of knowledge for successful crop production. Also, he highlights soil fertility and plant nutrition principles; describes root function and ion absorption by plant roots and how to be a soil–crop system diagnostician. Section II-Physical and Physiochemical Characteristics of the Soil contains five chapters. This section focuses on soil classification, physical properties of the soil, soil physiochemical properties, soil pH, soil organic matter characteristics, and methodology used for the determination and interpretation of these soil properties and characteristics. Section III-Plant Elemental Requirements and Associated Elements, comprises five chapters that discuss the major essential macronutrients and micronutrients as well as beneficial or toxic elements including trace elements. Section IV-Methods of Soil Fertility and Plant Nutrition Assessment, has two chapters that cover soil and plant sample handling, preparation, analysis, and interpretation of the results. This section provides soil testing/monitoring techniques, strategies to maintain or improve soil and plant nutritional status, and tables with values that can be used for interpreting test results (i.e. critical values, standard values and sufficiency ranges). Section V-Amendments for Soil Fertility Maintenance has four chapters devoted to the following topics: lime and liming materials, type and properties of inorganic and organic fertilizer placement techniques, and soil water requirements and purposes (water quality and water treatment processes). Section VI-Methods of Soilless Plant Production in two chapters the information needed for soilless plant production such as: hydroponic systems (i.e. systems with or without use a rooting medium) and soilless rooting growing media (i.e. mosses, pinebark, vermiculite, manure, etc.). The last Section Miscellaneous in three chapters provides information for soil farming/gardening (i.e. fertilizers, food safety, etc.), climatic factors (i.e. wind, air temperature, rainfall), and management practices (i.e. precision farming).

This new edition will be an essential and for many professionals specializing in Plant Nutrition, Physiology, Agronomy, Soil Fertility and Soil Plant Nutrition for many professionals. The book is reasonably priced, so it can be used as a reference book in undergraduate and post-graduate Plant Nutrition courses. Furthermore, this book is a valuable reference for crop/plant consultants/advisors, growers, agronomists, plant and soil science laboratories, because of the new material provide in the body of the inclusion of useful appendices such as: Glossary, terms and chemical formulas, Formulation and Extraction Reagents, Preparation Procedures and Content Determination for Plant Tissue, Weight and Book and Text References.

REFERENCES BOOKS:

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