





Special Issue Reprint

Sustainable Fertilization Management Consequences to Horticultural Crops

www.mdpi.com/books/reprint/11675

Edited by Wacław Jarecki Maciej Balawejder Natalia Matłok

ISBN 978-3-7258-5351-9 (Hardback) ISBN 978-3-7258-5352-6 (PDF)



To meet the ever-increasing global demand for food, the agricultural community continues to seek innovative practices to boost crop yields without sacrificing the environment. For example, using huge amounts of fertilizers hampers soil health and generates pollution. Integrated nutrient management paves the way towards overcoming these problems, which involves the conjunctive use of chemical fertilizers and organic manures. The application of plant nutrients in an optimum ratio and adequate amounts is called "Balanced Fertilization".

Sustainable Fertilization Management is the proper supply of all nutrients throughout the growth of a crop. It is now commonly understood that irrational and/or excessive fertilizer application does not always translate into a continuous increase in crop yield. In contrast, a balanced fertilization strategy is economically superior, and is a more sustainable agricultural practice.

According to the "Liebig's barrel" principle, plant growth is dictated by the scarcest resource (limiting factor), and not by the total resources available. A deficiency in one nutrient cannot be compensated by a surplus of any of the others. Thus, one nutrient alone cannot ensure the yield, and a balance between the nutrients is essential to ensure attainment of yields according to the genetic potential of the crops. Hence, research in this field must be up to date, and is crucial for science and the practice of horticulture.



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