Soil fertility is the ability of soil to sustain plant growth and optimize crop yield. This can be enhanced through organic and inorganic fertilizers to the soil. Nuclear techniques provide data that enhances soil fertility and crop production while minimizing the environmental impact. An integrated soil fertility management aims at maximizing the efficiency of the agronomic use of nutrients and improving crop productivity. This can be achieved through the use of grain legumes, which enhance soil fertility through biological nitrogen fixation, and the application of chemical fertilizers. Soil fertility management is very important for sustainable food production and maintenance of the environment. Fertilizer use and improved varieties were some of the major ingredients of the green revolution in Europe, Latin America, and Asia. Africa is the remaining region in the world with decreasing food production per capita. Soil scientists that focus on soil fertility are interested in managing nutrients to improve crop productivity. They focus on using commercial fertilizers, manures, waste products, and composts to add nutrients and organic matter to the soil. Sometime they also add chemicals that change the pH to a more optimum level for nutrient availability to plants. Soil fertility experts must also be careful to ensure that practices are environmentally sustainable. Inappropriate management of nutrients can lead to contamination of lakes, rivers, streams, and groundwater. In addition, adding amendments to th
The sixth edition of Soils and Soil Fertility provides a thorough introduction to soil science as well as the fundamentals of soil fertility, and is an appropriate text for undergraduate students in agricultural and/or environmental sciences. Each chapter is well organized and features boldface subheadings to assist in quickly locating topics of interest. In summary, this textbook is comprehensive, readable, and does not bog down in vernacular or complex reference tables. Thus, it is an ideal choice for support of an introductory soil science course. "Soils and Soil Fertility by Troeh and Thompson would be an excellent textbook for soils and related classes. This is a very intelligent book full of supportive black and white illustrations within the text. Manitoba Soil Fertility Guide. REVISED 2007. Foreword. Guidelines in this publication are based upon traditional recommendations developed by the Manitoba Soil Fertility Advisory Committee, and updated through new research findings. When possible, concepts and recommendations are referenced to the source of the original research or review of that research. Introduction. Table of Contents. INTRODUCTION Nutrient Requirements and Crop Responses on Manitoba Soils. 1. NITROGEN. 2. Pulse Crop Nitrogen Contributions. 3. Fertilization of Annual Crops. 4. Soil fertility is the ability of soil to sustain plant growth and optimize crop yield. This can be enhanced through organic and inorganic fertilizers to the soil. Nuclear techniques provide data that enhances soil fertility and crop production while minimizing the environmental impact. An integrated soil fertility management aims at maximizing the efficiency of the agronomic use of nutrients and improving crop productivity. This can be achieved through the use of grain legumes, which enhance soil fertility through biological nitrogen fixation, and the application of chemical fertilizers.