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Nota di contenuto	Preface -- About the editors -- 1 Animal Manure Production and Utilization in the US -- 2 Residual Veterinary Pharmaceuticals in Animal Manures and Their Environmental Behaviors in Soils -- 3 Changes in Nutrient Content and Availability during the Slow Pyrolysis of Animal Wastes -- 4 Soil Amino Compound and Carbohydrate Contents Influenced by Organic Amendments -- 5 Nitrogen Mineralization in Soils Amended with Manure as Affected by Environmental Conditions -- Soil Enzyme Activities as Affected by Manure Types, Application Rates, and Management Practices -- 7 Phosphatase Activities and Their Effects on Phosphorus Availability in Soils Amended with Livestock Manures -- 8 Variety and Solubility of Phosphorus Forms in Animal Manure and Their Effects on Soil Test Phosphorus -- 9 Phytate in Animal Manure

and Soils: Abundance, Cycling and Bioavailability -- 10 Phosphorus Forms and Mineralization Potentials of Alabama Upland Cotton Production Soils Amended with Poultry Litter -- 11 Chemistry and Application of Industrial By-Products to Animal Manure for Reducing Phosphorus Losses to Surface Waters -- 12 Nutrient Chemistry of Manure and Manure-Impacted Soils as Influenced by Application of Bauxite -- 13 Investigation of Compound-Specific Organic-Inorganic Phosphorus Transformation Using Stable Isotope Ratios in Phosphate -- 14 Chemical Characteristics of Custom Compost for Highbush Blueberry -- 15 Distribution and Biodegradability of Water Soluble Organic Carbon and Nitrogen in Subarctic Alaskan Soils under Three Different Land Uses -- 16 Remote Sensing of Nutrient Characteristics of Soils and Crops in Biosolid Amended Soils -- 17 Cotton Production Improvement and Environmental Concerns from Poultry Litter Application in Southern and Southeastern USA Soils -- Index.

Sommario/riassunto

Intensive high-yield agriculture today is typically dependent on addition of fertilizers (synthetic chemicals, animal manure, etc.). Increased knowledge on animal manure management and plant nutrient chemistry is required for improving utilization efficiency and minimizing losses of both inorganic and organic sources. Contributed by over 30 insightful senior researchers and innovative junior investigators, 17 chapters in this book highlight recent research advances in applied nutrient chemistry geared toward sustainable agriculture and environment, and outlook emerging researchable issues on alternative utilization and environmental monitoring of manure and other byproducts that may stimulate new research ideas and direction in the relevant fields. Chapter topics of interest include, but are not limited, to speciation, quantification, and interactions of various plant nutrients and relevant contributories in manure, soil, and plants. Covering issue-oriented comprehensive reviews and problem-solving-driven case studies, this book will serve as a valuable reference source for university faculty, graduate students, extension specialists, animal and soil scientists, agricultural engineers and other technical service providers, and government regulators who work and deal with various aspects of animal manure and plant nutrient management.