

1. Record Nr.	UNINA9910446336503321
Titolo	Inositol phosphates [[electronic resource] ] : linking agriculture and the environment // edited by Benjamin L. Turner, Alan E. Richardson and Edward J. Mullaney
Pubbl/distr/stampa	Wallingford, UK ; ; Cambridge, MA, : CAB International, c2007
ISBN	1-280-73610-0 9786610736102 1-84593-153-X
Descrizione fisica	1 online resource (300 p.)
Altri autori (Persone)	Turner Benjamin L Richardson Alan E Mullaney Edward J
Disciplina	572/.553
Soggetti	Inositol phosphates Inositol phosphates - Environmental aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""Contents""; ""Contributors""; ""Preface""; ""Acknowledgements""; ""1. Nomenclature and Terminology of Inositol Phosphates: Clarification and a Glossary of Terms""; ""2. Identification of Inositol Phosphates by Nuclear Magnetic Resonance Spectroscopy: Unravelling Structural Diversity""; ""3. High-performance Chromatographic Separations of Inositol Phosphates and Their Detection by Mass Spectrometry""; ""4. Origins and Biochemical Transformations of Inositol Stereoisomers and Their Phosphorylated Derivatives in Soil""; ""5. Isolation and Assessment of Microorganisms That Utilize Phytate"" ""6. Phytate-degrading Enzymes: Regulation of Synthesis in Microorganisms and Plants""""7. Phytases: Attributes, Catalytic Mechanisms and Applications""; ""8. Seed Phosphorus and the Development of Low-phytate Crops""; ""9. Phytase and Inositol Phosphates in Animal Nutrition: Dietary Manipulation and Phosphorus Excretion by Animals""; ""10. Environmental Implications of Inositol Phosphates in Animal Manures""; ""11. Ligand Effects on Inositol Phosphate Solubility and Bioavailability in Animal Manures""

12. Inositol Phosphates in Soil: Amounts, Forms and Significance of the Phosphorylated Inositol Stereoisomers  
13. Abiotic Reactions of Inositol Phosphates in Soil  
14. Interactions Between Phytases and Soil Constituents: Implications for the Hydrolysis of Inositol Phosphates  
15. Plant Utilization of Inositol Phosphates  
16. Inositol Phosphates in Aquatic Systems  
Index  
A  
B  
C  
D  
E  
F  
G  
H  
I  
K  
L  
M  
N  
O  
P  
Q  
R  
S  
T  
U  
V  
W  
X  
Y  
Z

---

## Sommario/riassunto

Inositol phosphates are a group of organic compounds found widely in the natural environment. They are important in agriculture because they constitute most of the phosphorus in grain seeds, but they cannot be digested by some animals. As a result, considerable research has been directed towards improving the digestibility of inositol phosphates in animal diets. Inositol phosphates are also abundant in soils and water bodies, yet a clear understanding of their behavior in the environment remains elusive. This is surprising given the importance of phosphorus in the nutrition of both terrestrial

---