1. Record Nr. UNINA9910957497903321

Titolo	Biological confinement of genetically engineered organisms / / Committee on Biological Confinement of Genetically Engineered Organisms, Board on Agriculture and Natural Resources, Board on Life Sciences, Division on Earth and Life Studies
Pubbl/distr/stampa	Washington, DC, : National Academies Press, c2004
ISBN	9786610176724 9781280176722 1280176725 9780309527781 0309527783
Edizione	[1st ed.]
Descrizione fisica	1 online resource (276 p.)
Disciplina	577/.18
Soggetti	Transgenic organisms - Safety measures Confinement farms Agricultural biotechnology Infertility in animals Transgenic organisms - Risk assessment
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 (p. 199-234) and index.
Nota di contenuto	""Front Matter""; ""Acknowledgments""; ""Preface""; ""Contents""; ""Tables, Figures, and Boxes""; ""Executive Summary""; ""1 Introduction""; ""2 When and Why to Consider Bioconfinement""; ""3 Bioconfinement of Plants""; ""4 Bioconfinement of Animals: Fish, Shellfish, and Insects""; ""5 Bioconfinement of Viruses, Bacteria, and Other Microbes""; ""6 Biological and Operational Considerations for Bioconfinement""; ""References""; ""About the Authors""; ""Board on Agriculture and Natural Resources Publications""; ""Index""
Sommario/riassunto	Genetically engineered organisms (GEOs) have been under development for more than 20 years while GE crops have been grown commercially during the last decade. During this time, a number of questions have cropped up concerning the potential consequences that certain GEOs

might have on natural or managed ecosystems and human health. Interest in developing methods to confine some GEOs and their transgenes to specifically designated release settings has increased and the success of these efforts could facilitate the continued growth and development of this technology. Biological Confinement of Genetically Engineered Organisms examines biological methods that may be used with genetically engineered plants, animals, microbes, and fungi. Bioconfinement methods have been applied successfully to a few non-engineered organisms, but many promising techniques remain in the conceptual and experimental stages of development. This book reviews and evaluates these methods, discusses when and why to consider their use, and assesses how effectively they offer a significant reduction of the risks engineered organisms can present to the environment. Interdisciplinary research to develop new confinement methods could find ways to minimize the potential for unintended effects on human health and the environment. Need for this type of research is clear and successful methods could prove helpful in promoting regulatory approval for commercialization of future genetically engineered organisms.