

1. Record Nr.	UNINA9910476773303321
Titolo	Sterile insect technique : principles and practice in area-wide integrated pest management // edited by Victor A. Dyck, Jorge Hendrichs, A. S. Robinson
Pubbl/distr/stampa	Boca Raton, Florida : , : CRC Press, , [2021] ©2021
ISBN	1-00-303557-4 1-003-03557-4 1-000-37776-8
Edizione	[Second edition.]
Descrizione fisica	1 online resource (1216 pages) : illustrations
Disciplina	338.4762148097305
Soggetti	Insect sterilization Insect pests - Biological control
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Sommario/riassunto	The sterile insect technique (SIT) is an environment-friendly method of pest control that integrates well into area-wide integrated pest management (AW-IPM) programmes. This book takes a generic, thematic, comprehensive, and global approach in describing the principles and practice of the SIT. The strengths and weaknesses, and successes and failures, of the SIT are evaluated openly and fairly from a scientific perspective. The SIT is applicable to some major pests of plant-, animal-, and human-health importance, and criteria are provided to guide in the selection of pests appropriate for the SIT. In the second edition, all aspects of the SIT have been updated and the content considerably expanded. A great variety of subjects is covered, from the history of the SIT to improved prospects for its future application. The major chapters discuss the principles and technical components of applying sterile insects. The four main strategic options in using the SIT - suppression, containment, prevention, and eradication - with examples of each option are described in detail. Other chapters deal with supportive technologies, economic,

environmental, and management considerations, and the socio-economic impact of AW-IPM programmes that integrate the SIT. In addition, this second edition includes six new chapters covering the latest developments in the technology: managing pathogens in insect mass-rearing, using symbionts and modern molecular technologies in support of the SIT, applying post-factory nutritional, hormonal, and semiochemical treatments, applying the SIT to eradicate outbreaks of invasive pests, and using the SIT against mosquito vectors of disease. This book will be useful reading for students in animal-, human-, and plant-health courses. The in-depth reviews of all aspects of the SIT and its integration into AW-IPM programmes, complete with extensive lists of scientific references, will be of great value to researchers, teachers, animal-, human-, and plant-health practitioners, and policy makers.

---