1. Record Nr. UNINA9910800177203321

Titolo	Closed circuit trickle irrigation design : theory and applications / / edited by Megh R. Goyal, PhD, PE, senior editor-in-chief ; Hani A.A. Mansour, PhD, co-editor
Pubbl/distr/stampa	Oakville, Ontario : , : Apple Academic Press, , [2016] ©2016
ISBN	0-429-17342-3 1-4987-2437-X
Descrizione fisica	1 online resource (430 p.)
Collana	Research Advances in Sustainable Micro Irrigation ; ; Volume 7
Disciplina	631.5/87
Soggetti	Microirrigation Irrigation farming Irrigation water Water-supply, Agricultural - Management Electricity in agriculture
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 at the end of each chapters.
Nota di contenuto	Front Cover; CONTENTS; LIST OF CONTRIBUTORS; LIST OF ABBREVIATIONS; LIST OF SYMBOLS; PREFACE; FOREWORD 1; FOREWORD 2; FOREWORD 3; FOREWORD 4; WARNING/DISCLAIMER; ABOUT SENIOR EDITOR-IN-CHIEF; ABOUT CO-EDITOR; BOOK REVIEWS; OTHER BOOKS ON MICRO IRRIGATION TECHNOLOGY FROM APPLE ACADEMIC PRESS, INC.; PART I IRRIGATION METHODS; CHAPTER 1: SOIL MOISTURE AND SALINITY DISTRIBUTIONS UNDER MODIFIED SPRINKLER IRRIGATION; CHAPTER 2: PERFORMANCE OF SPRINKLER IRRIGATED WHEAT - PART I; CHAPTER 3: PERFORMANCE OF SPRINKLER IRRIGATED WHEAT - PART II; PART II CLOSED CIRCUIT TRICKLE IRRIGATION DESIGN CHAPTER 4: DESIGN CONSIDERATIONS FOR CLOSED CIRCUIT DESIGN OF DRIP IRRIGATION SYSTEMCHAPTER 5: PERFORMANCE OF MAIZE UNDER BUBBLER IRRIGATION SYSTEM; CHAPTER 6: ENERGY AND WATER SAVINGS IN DRIP IRRIGATION SYSTEMS; CHAPTER 7: AUTOMATION OF MINI-SPRINKLER AND DRIP IRRIGATION SYSTEMS; PART III APPLICATIONS IN SANDY SOILS; CHAPTER 8: WATER AND FERTILIZER

USE EFFICIENCIES FOR DRIP IRRIGATED MAIZE; CHAPTER 9: PERFORMANCE OF DRIP IRRIGATED YELLOW CORN: KINGDOM OF SAUDI ARABIA; CHAPTER 10: WATER AND FERTILIZER USE EFFICIENCIES FOR DRIP IRRIGATED CORN: KINGDOM OF SAUDI ARABIA
CHAPTER 11: PERFORMANCE OF DRIP IRRIGATED SOYBEANCHAPTER 12: DRIP IRRIGATION IN RICE; CHAPTER 13: EVALUATION OF EMITTER CLOGGING FOR DRIP IRRIGATED SNAP BEANS; CHAPTER 14: EVALUATION OF EMITTER CLOGGING; CHAPTER 15: EVAPOTRANSPIRATION FOR CYPRESS AND PINE FORESTS: FLORIDA, USA1; APPENDIX A: CONVERSION SI AND NON-SI UNITS; APPENDIX B: PIPE AND CONDUIT FLOW; APPENDIX C: PERCENTAGE OF DAILY SUNSHINE HOURS: FOR NORTH AND SOUTH HEMISPHERES; APPENDIX D: PSYCHOMETRIC CONSTANT () FOR DIFFERENT ALTITUDES (Z); APPENDIX E: SATURATION VAPOR PRESSURE [es] FOR DIFFERENT TEMPERATURES (T)
APPENDIX F: SLOPE OF VAPOR PRESSURE CURVE () FOR DIFFERENT TEMPERATURES (T)APPENDIX G: NUMBER OF THE DAY IN THE YEAR (JULIAN DAY); APPENDIX H: STEFAN-BOLTZMANN LAW AT DIFFERENT TEMPERATURES (T); APPENDIX I: THERMODYNAMIC PROPERTIES OF AIR AND WATER; Back Cover

Sommario/riassunto

Closed circuit trickle irrigation is a form of micro irrigation that increases energy and water efficiency by using closed circuit drip irrigation systems designs. Modifications are made to traditional micro irrigation methods to reduce some of the problems and constraints, such as low compressor water at the end of irrigation lines. This approach has proved successful for the irrigation of fruit trees and some vegetable and field crops. Closed circuits of drip irrigation systems require about half of the water needed by sprinkler or surface irrigation. Lower operating pressures and flow rates