
Fertigation Technology

Engineering Interventions in Sustainable Trickle Irrigation

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A Text Book

11th IFIP WG 5.14 International Conference, CCTA 2017, Jilin, China, August 12-15, 2017, Proceedings, Part I

Irrigation Requirements and Uniformity, Fertigation, and Crop Performance

Management Strategies for Water Use Efficiency and Micro Irrigated Crops

Fertigation Technology

Engineering Interventions in Sustainable Trickle Irrigation

Advances in Agronomy

Sustainable Agriculture Systems and Technologies

Technologies for Sustainable Rural Development: Having Potential of Socio-Economic Upliftment (TSRD-2014)

Emerging Technologies for Sustainable Desalination Handbook

A Novel Method of Applying Crop Nutrients

Results of a Technical Co-operation Project Organized by the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture

Green Technological Innovation for Sustainable Smart Societies

Performance, Requirements, and Efficiency

Water Resources Management and Sustainable Agriculture

Innovations in Agriculture for a Self-Reliant India

Proceedings of the 2nd International Conference on Energy, Environment and Materials Science (EEMS 2016), July 29-31, 2016, Singapore

The Second IFIP International Conference on Computer and Computing Technologies in Agriculture (CCTA2008), October 18-20, 2008, Beijing, China

Food Security and Environmental Quality in the Developing World

Sustainable Micro Irrigation Design Systems for Agricultural Crops

A Novel Method of Applying Crop Nutrients

The Dissemination of Reliable Knowledge

Computer and Computing Technologies in Agriculture II, Volume 2

Fertigation

Methods and Practices

A Novel Method of Applying Crop Nutrients

CLARE ANGELICA

Engineering Interventions in Sustainable Trickle Irrigation New India Publishing Agency

Papers presented at the State-Level Seminar on Water Resources Management, held at Srinagar during 10-11 March 2004.

Satellite Farming APH Publishing

Globally stone fruits are emerging in the market due to the increased consumer's desire for health-promoting foods. Stone fruits attract research attention, mainly due to the cultural and commercial aspects of the array of varieties that are grown. Being grown in wide range of environments, it is very important to understand what factors influence the production and quality attributes of stone fruits. There is a lack of systematic scientific information on strategic approach for production technologies of such fruits. This book will be first of its kind focusing on technological aspects of stone fruits especially on latest developments in present day horticulture. It will be an essential reference for professionals including academicians, scholars, researchers and industries working in the said area. We hope that readers will find this book a useful resource for their research or studies, and it will be helpful in the development of high quality stone fruits in future which will improve the economic and social life of people. Besides, this book fulfills the needs of a number of horticultural courses of Universities and will serving as a pomological manual for all occasions.

Innovative Horticulture CRC Press

This book will bring together all recent and updated information on RCT in pulses and pulse based cropping system which will be of immense use to researchers, extension personnel, students, research scholars across the nation.

Fertigation Springer

Improving agricultural water use efficiency (WUE) is vitally important in many parts of the world due to the decreasing availability of water resources and the increasing competition for water between different users. Micro irrigation is an effective tool for conserving water resources. Studies have revealed a significant water savings, ranging from 40% to 70% under drip irrigation compared with surface irrigation. This new volume, *Engineering Interventions in Sustainable Trickle Irrigation*:

Irrigation Requirements and Uniformity, Fertigation, and Crop Performance, presents valuable research that evaluates crop water and fertigation requirements, examines optimum irrigation and fertigation scheduling, and analyzes the performance of agricultural crops under micro irrigation. With an interdisciplinary perspective, this volume addresses the urgent need to explore and investigates the current shortcomings and challenges of water resources engineering, especially in micro irrigation engineering. The volume discusses crop water requirements, fertigation technology, and performance of agricultural crops under best management practices. The chapter authors present research studies on drip irrigated tomato, chilies, cucumber, eggplant, cabbage, garlic, sugarcane maize, cashew nut, sapota, banana, mango, and blueberries. Removing the research gap, this volume provides new information that will be valuable to those involved in micro irrigation engineering.

Water Balance and Fertigation for Crop Improvement in West Asia Scientific Publishers - Competition Tutor

This book discusses the innovative and efficient technological solutions for sustainable smart societies in terms of alteration in industrial pollution levels, the effect of reduced carbon emissions, green power management, ecology, and biodiversity, the impact of minimal noise levels and air quality influences on human health. The book is focused on the smart society development using innovative low-cost advanced technology in different areas where the growth in employment and income are driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy, and resource efficiency and prevention of the loss of biodiversity and ecosystem services. The book also covers the paradigm shift in the sustainable development for the green environment in the post-pandemic era. It emphasizes and facilitates a greater understanding of existing available research i.e., theoretical, methodological, well-established and validated empirical work, associated with the environmental and climate change aspects.

Computer and Computing Technologies in Agriculture XI CRC Press

Management Strategies for Water Use Efficiency and Micro Irrigated Crops presents new research and technologies for making better use of water resources for agricultural purposes.

The chapters focus on better management to improve allocation and irrigation water efficiency and look at performance factors as well. Chapters look at irrigation technology, environmental conditions, and scheduling of water application. One section of the book focuses on water management in the cultivation of sugarcane, a very important industrial crop used in many fields. Other sections are devoted to principles and challenging technologies, water use efficiency for drip-irrigated crops, performance of fertigated rice under micro irrigation, and evaluation of performance of drip-irrigated crops. This valuable book is a must for those struggling to find ways to address the need to maintain efficient crop production in the midst of water shortages. With chapters from hands-on experts in the field, the book will be an invaluable reference and guide to effective micro irrigation methods.

Sustainability of Irrigated Agriculture CRC Press

This new book, *Sustainable Micro Irrigation Design Systems for Agricultural Crops*, brings together the best research for efficient micro irrigation methods for field crops, focusing on design methods and best practices. Covering a multitude of topics, the book presents research and studies on: Indigenous alternatives for use of saline and alkali waters Hydraulic performance Distribution of moisture Fertigation technology Buried micro irrigation laterals Drip irrigation scheduling Rainwater harvesting Adoption and economic impact of a micro irrigation model This book is a must for those interested in irrigation planning and management, namely, researchers, scientists, educators, and students.

Fertigation Technology Allied Publishers

This book focuses on the recent advances in precision agriculture and satellite farming, detailing applications for sensing, data handling, modeling, and control. In addition, the book reviews its history - establishing the background on the various processes and applications - describes the current status, and offers insight into the future technology of satellite farming in India. Introducing processes and applications based on a global scale, the book reveals how precision agriculture can be used in large-scale agriculture, community agriculture, and diversified farming. It includes site-specific information from a variety of information sources for planning, planting, growing, and harvesting agricultural crops. It also presents a new concept based on the

control system theory that can be used to formulate systematic methods for more effective precision crop production. Precision agriculture when properly integrated into the crop production process, can greatly improve overall production and sustainability.

Resource Conservation Technology in Pulses CRC Press
With special reference to India.

How Well Do Facts Travel? Springer Science & Business Media
This book presents a variety of policy adoption methods, irrigation scheduling, and design procedures in micro irrigation engineering for horticultural crops. The chapters range from policy interventions to applications of systems for different crops and under different land conditions. Compiling valuable information and research, the book is divided into three main sections: Policy Options: Drip Irrigation Among Adopters Irrigation Scheduling of Horticultural Crops Design of Drip Irrigation Systems The editors present valuable research and information on micro irrigation methods in an effort to focus on innovation and evolving new paradigms for efficient utilization of water resources. The adoption of micro irrigation systems can be a panacea for irrigation related problems and can help to increase the yield and area under cultivation, especially for small farmers without abundant technological resources. *Micro Irrigation Engineering for Horticultural Crops: Policy Options, Scheduling, and Design* will be valuable for agricultural engineering students, irrigation engineers, and scientists/professors in engineering.

Sugarcane Biorefinery, Technology and Perspectives Springer
Nature

Fertigation requires a thorough understanding of the science behind the technology to make it deliver the immense possibility it offers in crop production. Though the idea of fertigation existed from the times of solution culture, it did not receive the necessary attention from among plant nutritionists and agronomists when it reappeared in the context of micro irrigation. Fertilizer application in field agriculture has also not developed as a precision technology. Recommendations of the quantum of fertilizers required for a crop, at least in India are not based on current varieties of the crops, nor have they anything to do with the growth rate and developmental changes occurring while a crop is managed by the grower. Most of the fertilizer recommendations are itself very old and efforts to make them relevant to the

current growing conditions, soil status, crop variety and crops reaction to the environment etc. are very limited. It is even worse when growers follow traders' recommendations whose idea is to sell more the fertilizer they supply. Not only lower yields and very low fertilizer use efficiencies, but the deterioration of soil and water bodies are the results. Note: T&F does not sell or distribute the hardback in India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka. This title is co-published with NIPA.

Recent Trends in Mechatronics Towards Industry 4.0 CRC Press

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A Text Book Academic Press

The papers in this volume comprise the refereed proceedings of the Second IFIP International Conference on Computer and Computing Technologies in Agriculture (CCTA2008), in Beijing, China, 2008. The conference on the Second IFIP International Conference on Computer and Computing Technologies in Agriculture (CCTA 2008) is cooperatively sponsored and organized by the China Agricultural University (CAU), the National Engineering Research Center for Information Technology in Agriculture (NERCITA), the Chinese Society of Agricultural

Engineering (CSAE), International Federation for Information Processing (IFIP), Beijing Society for Information Technology in Agriculture, China and Beijing Research Center for Agro-products Test and Farmland Inspection, China. The related departments of China's central government bodies like: Ministry of Science and Technology, Ministry of Industry and Information Technology, Ministry of Education and the Beijing Municipal Natural Science Foundation, Beijing Academy of Agricultural and Forestry Sciences, etc. have greatly contributed and supported to this event. The conference is as good platform to bring together scientists and researchers, agronomists and information engineers, extension servers and entrepreneurs from a range of disciplines concerned with impact of Information technology for sustainable agriculture and rural development. The representatives of all the supporting organizations, a group of invited speakers, experts and researchers from more than 15 countries, such as: the Netherlands, Spain, Portugal, Mexico, Germany, Greece, Australia, Estonia, Japan, Korea, India, Iran, Nigeria, Brazil, China, etc.

11th IFIP WG 5.14 International Conference, CCTA 2017, Jilin, China, August 12-15, 2017, Proceedings, Part I Apple Academic Press

The two volumes IFIP AICT 545 and 546 constitute the refereed post-conference proceedings of the 11th IFIP WG 5.14 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2017, held in Jilin, China, in August 2017. The 100 revised papers included in the two volumes were carefully reviewed and selected from 282 submissions. They cover a wide range of interesting theories and applications of information technology in agriculture. The papers focus on four topics: Internet of Things and big data in agriculture, precision agriculture and agricultural robots, agricultural information services, and animal and plant phenotyping for agriculture.

Irrigation Requirements and Uniformity, Fertigation, and Crop Performance Springer

Improving agricultural water use efficiency (WUE) is vitally important in many parts of the world due to the decreasing availability of water resources and the increasing competition for water between different users. Micro irrigation is an effective tool for conserving water resources. Studies have revealed a significant water savings, ranging from 40% to 70% under drip

irrigation compared with surface irrigation. This new volume, *Engineering Interventions in Sustainable Trickle Irrigation: Irrigation Requirements and Uniformity, Fertigation, and Crop Performance*, presents valuable research that evaluates crop water and fertigation requirements, examines optimum irrigation and fertigation scheduling, and analyzes the performance of agricultural crops under micro irrigation. With an interdisciplinary perspective, this volume addresses the urgent need to explore and investigate the current shortcomings and challenges of water resources engineering, especially in micro irrigation engineering. The volume discusses crop water requirements, fertigation technology, and performance of agricultural crops under best management practices. The chapter authors present research studies on drip irrigated tomato, chilies, cucumber, eggplant, cabbage, garlic, sugarcane maize, cashew nut, sapota, banana, mango, and blueberries. Removing the research gap, this volume provides new information that will be valuable to those involved in micro irrigation engineering.

[Management Strategies for Water Use Efficiency and Micro Irrigated Crops](#) Academic Press

Irrigated agriculture and the use of water resources in agriculture face the challenges of sustainable development. Research has advanced our knowledge of water use by crops, soil-water-solutes interactions, and the engineering and managerial tools needed to mobilize, convey, distribute, control and apply water for agricultural production. However, the achievements booked in user practice have revealed the need for new developments in the areas of resource conservation, control of environmental and health impacts, modernisation of technologies and management, economic viability and the social acceptance of changes. The contributions to Sustainability of Irrigated Agriculture cover most of the relevant disciplines. Besides its multidisciplinary nature, the different origins, experience, backgrounds and practices of the authors provide a wide, in-depth analysis of the various aspects of water resource utilization in agriculture. The papers review scientific, technical and managerial aspects, highlighting the main problems, issues and future developments. The book covers the different aspects of sustainability, including environmental, technical, economic, institutional and social ones. Advances in irrigation science and engineering are dealt with, both on- and off-farm. Special attention is paid to the different components of

water quality management, to the transfer of technology, and to capacity building.

Fertigation Technology Springer Nature

Emerging Technologies for Sustainable Desalination Handbook provides professionals and researchers with the latest treatment activities in the advancement of desalination technology. The book enables municipalities and private companies to custom-design sustainable desalination plants that will minimize discharge, energy costs and environmental footprint. Individual case studies are included to illustrate the benefits and drawback of each technique. Sections discuss a multitude of recently developed, advanced processes, along with notable advances made in existing technologies. These processes include adsorption, forward osmosis, humidification and dehumidification, membrane distillation, pervaporation and spray type thermal processes. In addition, theoretical membrane materials, such as nanocomposite and carbon nanotube membranes are also explored. Other chapters cover the desalination of shale gas, produced water, forward osmosis for agriculture, desalination for crop irrigation, and seawater for sustainable agriculture.

International in its coverage, the chapters of this handbook are contributed by leading authors and researchers in all relevant fields. Expertly explains recent advances in sustainable desalination technology, including nanocomposite membranes, carbon nanotube membranes, forward reverse osmosis and desalination by pervaporation Provides state-of-the-art techniques for minimizing system discharge, energy cost and environmental footprint Includes individual case studies to illustrate the benefits and drawbacks of each technique Discusses techniques for the custom-design of sustainable desalination plants for municipalities, private companies and industrial operations [Engineering Interventions in Sustainable Trickle Irrigation](#) CRC Press

Advances in Agronomy, Volume 156, continues to be recognized as a leading reference and first-rate source for the latest research in agronomy. Each volume contains an eclectic group of reviews by leading scientists throughout the world. As always, the subjects covered are rich, varied, and exemplary of the abundant subject matter addressed by this long-running serial. Includes numerous, timely, state-of-the-art reviews on the latest advancements in agronomy Features distinguished, well

recognized authors from around the world Builds upon this venerable and iconic review series Covers the extensive variety and breadth of subject matter in the crop and soil sciences *Advances in Agronomy* Springer Science & Business Media Fertigation requires a thorough understanding of the science behind the technology to make it deliver the immense possibility it offers in crop production. Though the idea of fertigation existed from the times of solution culture, it did not receive the necessary attention from among plant nutritionists and agronomists when it reappeared in the context of micro irrigation. Fertilizer application in field agriculture has also not developed as a precision technology. Recommendations of the quantum of fertilizers required for a crop, at least in India are not based on current varieties of the crops, nor have they anything to do with the growth rate and developmental changes occurring while a crop is managed by the grower. Most of the fertilizer recommendations are itself very old and efforts to make them relevant to the current growing conditions, soil status, crop variety and crops reaction to the environment etc. are very limited. It is even worse when growers follow traders' recommendations whose idea is to sell more the fertilizer they supply. Not only lower yields and very low fertilizer use efficiencies, but the deterioration of soil and water bodies are the results.

Sustainable Agriculture Systems and Technologies Springer Nature

This important volume, the ninth in the Research Advances in Sustainable Micro Irrigation book series, provides an invaluable addition to the literature and knowledge on the ever-growing need for sustainable irrigation for agricultural crops in many water-scarce parts of the world. The book specifically covers advances in fertigation for water management in general as well as for specific crops, such as peaches, maize, and citrus crops. Specific topics include: • The design of various surface and subsurface water emitters • Using information from weather stations for irrigation purposes • Ultra low drip irrigation technology • The management of weeds in crops using micro irrigation • New technology and advances in fertigation With chapters from researchers and practitioners in agricultural engineering, water research and technology, soil conservation, and other fields, this compendium provides a wealth of useful information that can be put into practice to enhance crop

production.