Crop Evapotranspiration Guidelines For Computing Water
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Crop Evapotranspiration
Handbook of Plant and Crop Physiology
Management, Performance, and Applications of Micro Irrigation Systems
Advanced Evapotranspiration Methods and Applications
Evapotranspiration Handbook of Plant and Crop Physiology
Development of Water Resources in India
Proceedings of International Conference on Emerging Technologies and Intelligent Systems
Geospatial Technologies for Effective Land Governance
Evapotranspiration
The Water We Eat
Evapotranspiration
Turfgrass and Landscape Irrigation Water
Quality Scheduling Irrigations
Climate Change
Crop Production Technologies
HYDROLOGY
AND WATERSHED MANAGEMENT
Looking Beyond the Horizon
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Crop Evapotranspiration

Handbook of Plant and Crop Physiology

This book presents the proceedings of the 17th International Conference on Global Research and Education, Inter-Academia 2018 held in Kaunas, Lithuania on 24–27 September 2018. The main goal of the conference was to provide an international forum to review, stimulate, and understand the recent trends in both fundamental and applied research. In addition to increasing interest in recent research findings, the conference aimed to strengthen the cooperation between the partners of the Inter-Academia community towards new theoretical and practical research advances. The papers included cover topics in the fields of material science and technology, nanotechnology, plasma physics, biotechnology and environmental engineering, electric and electronic engineering, robotics, measurement, identification, and control, soft computing techniques and modeling, multimedia and e-Learning. The book is a valuable scientific reference resource for the global scientific community.

Management, Performance, and Applications of Micro Irrigation Systems
Advanced Evapotranspiration Methods and Applications

His handy guide will help you schedule your irrigation needs so you can make every drop count. Inside you’ll find sections on the relationship between crop evapotranspiration and yield, how to measure crop evapotranspiration by measuring soil moisture, and how to interpret those readings. One of a series of water management handbooks prepared by the University of California Irrigation Program.

Evapotranspiration

Development of Water Resources in India

The World Banana Forum (WBF) publication developed a methodological guide to reduce water and carbon footprints in banana plantations worldwide. Members of the Working Group (WG) on Sustainable Production Systems and Environmental Impact acknowledged the contribution of banana production in the total global GHG emissions and the consumption of freshwater in the economic activity, both stressed in the 2015 Paris Climate Conference (COP21), having the agricultural sector a high mitigation potential. Therefore, the WG wishes to contribute to the global fight against climate change and promote the sustainable use of natural resources, developing practical tools to strengthen the efforts of the global banana industry to reduce its carbon and water footprint (CWF). Since banana farmers are struggling to adapt to climate change, the project aims to mainstream and support the adoption of best climate-smart practices and efficient water management in the banana value chain as part of the environmental strategy of organizations. Efforts to promote CWF reduction programs in the banana industry are still incipient and carried out mostly by multinationals, due in part to the implementation costs, the complexity of the topic for farmers, the lack of user-friendly tools to measure them efficiently, and that is still a B2B-driven strategy not yet recognized by consumers. Even though the need for supporting carbon and water footprint analysis (CWF) in the banana industry remains strong, there is still an apparent lack of sufficient financial incentives by both the governments and the global market.

Proceedings of International Conference on Emerging Technologies and Intelligent Systems

This volume discusses the sustainability of Egypt’s agriculture and the challenges involved. It provides a comprehensive review and the latest research findings, and covers a variety of topics under the following themes: · Integrated natural resources management for sustainable production · Integrated biopesticides and biofertilizers for sustainable agriculture · Integrated plant and animal production for a sustainable food supply · Policies for sustainable agriculture in Egypt The volume closes with a summary of the key conclusions and recommendations from all chapters. Together with the companion volume Sustainability of Agricultural Environment in Egypt: Part I, it offers an essential source of information for postgraduate students, researchers, and stakeholders alike.

Geospatial Technologies for Effective Land Governance
This book represents an overview of the direct measurement techniques of evapotranspiration with related applications to the water use optimization in the agricultural practice and to the ecosystems study. Different measuring techniques at leaf level (porometry), plant-level (sap-flow, lysimetry) and agro-ecosystem level (Surface Renewal, Eddy Covariance, Multi layer BREB), are presented with detailed explanations and examples. For the optimization of the water use in agriculture, detailed measurements on transpiration demands of crops and different cultivars, as well as results of different irrigation schemes and techniques (i.e. subsurface drip) in semi-arid areas for open-field, greenhouse and potted grown plants are presented. Aspects on ET of crops in saline environments, effects of ET on groundwater quality in xeric environments as well as the application of ET to climatic classification are also depicted. The book provides an excellent overview for both, researchers and student,s who intend to address these issues.

**Evapotranspiration**

This book on the sustainable use of soils and water addressed a variety of issues related to the utopian desire for environmental sustainability and the deviations from this scene observed in the real world. Competing interests for land are frequently a factor in land degradation, especially where the adopted land uses do not conform with the land capability (the natural use of soil). The concerns of researchers about these matters are presented in the articles comprising this Special Issue book. Various approaches were used to assess the (im)balance between economic profit and environmental conservation in various regions, in addition to potential routes to bring landscapes back to a sustainable status being disclosed.

**The Water We Eat**

The Earth is the only planet in our solar system that supports life. The complex process of evolution occurred on Earth only because of some unique environmental conditions that were present: water, an oxygen-rich atmosphere, and a suitable surface temperature. Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Thus, it requires field of attention towards reduction in the rise in atmospheric temperature, by controlling emitted greenhouse gases into the atmosphere in order to preserve natural resources and by introducing new technologies on alternative fuels. This book presents the fundamental effect on the origin of climate change, impacts over ice cap, melting of Arctic ice, rise in sea level and related technologies that can be implemented to cultivate our land for agriculture, growing forestation to reduce the impact of temperature rise and disaster on human being as well as on other livelihood. This also need to strive for novel policies that world leader should adopt.

**Evapotranspiration**

This book is a printed edition of the Special Issue "Earth Observation for Water Resource Management in Africa" that was published in Remote Sensing.

**Turfgrass and Landscape Irrigation Water Quality**

This book gathers contributions on modern irrigation environments in Egypt from an
environmental and agricultural perspective. Written by leading experts in the field, it discusses a wide variety of modern irrigation problems. In the context of water resources management in Egypt, one fundamental problem is the gap between growing water demand and limited supply. As such, improving irrigation systems and providing farmers with better control over water are crucial to increasing productivity. The book presents state-of-the-art technologies and techniques that can be effectively used to address a range of problems in modern irrigation, as well as the latest research advances. Focusing on water sensing and information technologies, automated irrigation technologies, and improved irrigation efficiency. It brings together a team of experts who share their personal experiences, describe the various applications, present recent advances, and discuss possibilities for interdisciplinary collaboration and implementing the techniques covered.

**Scheduling Irrigations**

Equations, tables.

**Climate Change**

This important book—the only complete, one-stop manual on microirrigation worldwide--offers knowledge and techniques necessary to develop and manage a drip/trickle or micro irrigation system. The simplicity of the contents facilitates a technician to develop an effective micro irrigation system. Management of Drip/Trickle or Micro Irrigation includes the basic considerations relating to soil-water-plant interactions, with topics such as methods for soil moisture measurement; evapotranspiration; irrigation systems; tensiometer use and installation; principles of drip/ micro/ trickle irrigation; filtration systems; automation; chloration; service and maintenance; design of drip irrigation and lateral lines; the evaluation of uniformity of application; and an economical analysis for selecting irrigation technology.

**Crop Production Technologies**

Irrigation has been and will continue to be an agricultural and rural investment priority. Development of the irrigation sector faces multiple challenges, including water scarcity and degradation, competition over shared resources, and the impact of climate change. Innovations are needed to address these challenges, as well as emerging needs, and to promote productive, equitable and sustainable water management. These guidelines, produced by an inter-agency team, highlight experiences and lessons learned from global irrigation investment operations. They introduce innovative approaches, tools and references, and provide practical guidance on how to incorporate or apply them at each stage of the investment project cycle. The guidelines will be a useful resource for national and international professionals involved in irrigation investment operations.

**HYDROLOGY AND WATERSHED MANAGEMENT**

This proceedings volume, with more than 30 chapters, is based on the presentations given at the National Conference on Water Resources and Hydropower (WRHP-2016) and represents the state-of-the-art in water resources in India. It includes experimental investigations, field studies, theoretical developments, numerical methods, as well as engineering achievements in water resources. The contributions are organised under four
main topics: • Water Resources and Management: covers the issues related to water resources planning and management, water conservation, flood mitigation, policies and governance, conflict over rivers and planning of groundwater evolution, Assessment of Sedimentation, Surface water quality, Rainfall assessment, • Climate Change and Global Warming: includes chapters on the impact of climate on water resources and groundwater, hydrological impacts of climate change, Ground Water Contaminants, Assessment of Evaporation and evapotranspiration effects on global warming • Hydraulic Structures: presents contributions on fluvial hydraulics, flow through Weirs, Open Channel flow, river flood control, scour and erosion, dam and downstream block failures and protection, Losses in pipes By combining these topics, the book provides a valuable resource for practitioners and researchers, including field engineers, academicians, planners, health specialists, disaster managers, decision makers and policy makers engaged in various aspects of water resources and hydropower. The WRHP-2016 was organised in association with the Indian Institute of Technology, Roorkee, Uttarakhand Jal Vidyut Nigam Limited and the Indian Society for Hydraulics, Pune and was held in University of Petroleum and Energy Studies, Dehradun, India from June 17-18, 2016.

Looking Beyond the Horizon

With the increased use of alternative irrigation water sources on turfgrass and landscape sites, their management is becoming more complex and whole ecosystems-oriented. Yet few turfgrass managers have received formal training in the intricacies of irrigation water. Turfgrass and Landscape Irrigation Water Quality: Assessment and Management provides a comprehensive, science-based review of irrigation water quality. The book examines field problems in a logical manner, provides clear scientific explanations, and offers detailed practical information for resolving each specific problem in an environmentally sustainable manner. Divided into four parts, the book begins with an overview of the assessment of irrigation water. It discusses factors that affect the quality of water, assists readers in understanding irrigation water quality tests, and examines field monitoring. The second part focuses on explaining scientific irrigation water quality situations or challenges associated with various water sources, including saline, seawater, and reclaimed irrigation water, as well as stormwater reuse. The next section explores management options for site-specific problems. The authors discuss irrigation system design when confronted with poor quality water, salt leaching, water acidification, and turfgrass nutritional considerations, and discusses lake, pond, and stream management and other water issues. Lastly, the text addresses potential environmental concerns related to irrigation water sources on the watershed/landscape level. The book contains several case studies which further clarify the material and provides a comprehensive appendix list of landscape plants and their relative salinity tolerances. The diversity and nature of various water quality related challenges are quite daunting, even for the most seasoned professional. This volume provides a foundation for understanding the complexities of water quality that is certain to lead to science-based management decisions that are environmentally friendly and sustainable for years to come.

Climate Change Impacts and Adaptation in Water Resources and Water Use Sectors

This book tackles the issue of using crop rotation to increase food production and secure it for the growing population of the future. Crop rotation can be a solution of food gaps in the developing counties. Crop rotation plays an important role in attaining soil
sustainability and in controlling pests and weeds. It can alleviate damage caused by climate change by reducing losses in productivity of the crops, minimizing soil fertility loss and increase irrigation water productivity. This book also includes the reviews of a large number of crop rotations that have been published internationally, and additionally, the crop rotations that have been implemented in Egypt have a unique characteristic to them and therefore, a large number of those reviews have also been included.

**Watershed Hydrology**

Crop production depends on the successful implementation of the soil, water, and nutrient management technologies. Food production by the year 2020 needs to be increased by 50 percent more than the present levels to satisfy the needs of around 8 billion people. Much of the increase would have to come from intensification of agricultural production.

Importance of wise usage of water, nutrient management, and tillage in the agricultural sector for sustaining agricultural growth and slowing down environmental degradation calls for urgent attention of researchers, planners, and policy makers. Crop models enable researchers to promptly speculate on the long-term consequences of changes in agricultural practices. In addition, cropping systems, under different conditions, are making it possible to identify the adaptations required to respond to changes. This book adopts an interdisciplinary approach and contributes to this new vision. Leading authors analyze topics related to crop production technologies. The efforts have been made to keep the language as simple as possible, keeping in mind the readers of different language origins. The emphasis has been on general descriptions and principles of each topic, technical details, original research work, and modeling aspects. However, the comprehensive journal references in each area should enable the reader to pursue further studies of special interest. The subject has been presented through fifteen chapters to clearly specify different topics for convenience of the readers.

**Sustainability of Agricultural Environment in Egypt: Part II**

This book pursues a comprehensive, multidisciplinary approach in order to analyze the relationship between water and food security. It demonstrates that most of the world’s economies lack sufficient water resources to secure their populations’ food requirements and are thus virtual importers of water. One of the most inspiring cases, which this book is rooted in, is Italy: the third largest net virtual water importer on earth. The book also shows that the sustainability of water depends on the extent to which societies recognize and take into account its value and contribution to agricultural production. Due to the large volumes of water required for food production, water and food security are in fact inextricably linked. Contributions from leading international experts and scholars in the field use the concepts of virtual water and water footprints to explain this relationship, with an eye to the empirical examples of wine, tomato and pasta production in Italy. This book provides a valuable resource for all researchers, professionals, policymakers and everyone else interested in water and food security.

**Evaporation and Evapotranspiration**

The aim of this paper is to facilitate the planning and design of land drainage systems for sound land and water management for engineers and other professionals. It considers the integration of technical, socio-economic and environmental factors and the need for system users' participation in the planning, design, operation and maintenance processes.
Access Free Crop Evapotranspiration Guidelines For Computing Water

The text provides guidelines for the appropriate identification of drainage problems, for the planning and design of field drainage systems (surface and subsurface) and the main drainage and disposal systems. The annexes provide more detailed information with technical background, appropriate equations, some cross-references for finding appropriate methodologies, and computer programs for calculation of extreme values, of permeability and some land drainage system parameters. --Publisher's description.

Encyclopedia of Water Science (Print)

A team of scientists and researchers from the University of Agriculture Faisalabad and University of Arid Agriculture Rawalpindi, in collaboration with FAO and Government of Punjab (Agriculture Department) worked together to delineate the Agro-Ecological Zoning (AEZ) in Punjab. AEZ refers to the division of Punjab region into land resource mapping units, having a unique combination of landform, soil and climatic characteristics, and/or land cover. Based on the most up to date collected information on natural resources, climate and agricultural markets, AEZ reveals an enormous potential for crop diversification and productivity. And it is the need of the hour in a country where population is rapidly growing and where climate changes (increases in temperature, changes in rainfall pattern, extreme weather events) evidence the vulnerability of the current agricultural systems. From a side AEZ will help to make smallholder farming a profitable business and overall enhance agriculture efficiency. On the other side, policymakers will be able to use data of AEZ and associated information on land characteristics (soil quality, topography, agricultural land use, yield etc) to formulate optimal policies for sustainable agricultural production.

Guidelines on irrigation investment projects

Continuous discoveries in plant and crop physiology have resulted in an abundance of new information since the publication of the second edition of the Handbook of Plant and Crop Physiology, necessitating a new edition to cover the latest advances in the field. Like its predecessors, the Third Edition offers a unique, complete collection of topics

Agro-Ecological Zones in Punjab - Pakistan

This edition of Evapotranspiration - Remote Sensing and Modeling contains 23 chapters related to the modeling and simulation of evapotranspiration (ET) and remote sensing-based energy balance determination of ET. These areas are at the forefront of technologies that quantify the highly spatial ET from the Earth's surface. The topics describe mechanics of ET simulation from partially vegetated surfaces and stomatal conductance behavior of natural and agricultural ecosystems. Estimation methods that use weather based methods, soil water balance, the Complementary Relationship, the Hargreaves and other temperature-radiation based methods, and Fuzzy-Probabilistic calculations are described. A critical review describes methods used in hydrological models. Applications describe ET patterns in alpine catchments, under water shortage, for irrigated systems, under climate change, and for grasslands and pastures. Remote sensing based approaches include Landsat and MODIS satellite-based energy balance, and the common process models SEBAL, METRIC and S-SEBS. Recommended guidelines for applying operational satellite-based energy balance models and for overcoming common challenges are made.
Access Free Crop Evapotranspiration Guidelines For Computing Water

Technological and Modern Irrigation Environment in Egypt

PRINT/ONLINE PRICING OPTIONS AVAILABLE UPON REQUEST AT e-reference@taylorandfrancis.com

Crop Evapotranspiration

This book focuses on hydrological modeling, water management, and water governance. It covers the applications of remote sensing and GIS tools and techniques for land use and land cover classifications, estimation of precipitation, evaluation of morphological changes, and monitoring of soil moisture variability. Moreover, remote sensing and GIS techniques have been applied for crop mapping to assess cropping patterns, computation of reference crop evapotranspiration, and crop coefficient. Hydrological modeling studies have been carried out to address various issues in the water sector. MODFLOW model was successfully applied for groundwater modeling and groundwater recharge estimation. Runoff modeling has been carried out to simulate the snowmelt runoff together with the rainfall and sub-surface flow contributions for snow-fed basins. A study has been included, which predicts the impact of the land use and land cover on stream flow. Various problems in the water sector have been addressed employing hydrological models such as SWAT, ArcSWAT, and VIC. An experimental study has been presented wherein the laboratory performance of rainfall simulator has been evaluated. Hydrological modeling studies involving modifications in the curve number methodology for simulation of floods and sediment load have also been presented. This book is useful for academicians, water practitioners, scientists, water managers, environmentalists, and administrators, NGOs, researchers, and students who are involved in water management with the focus on hydrological modeling, water management, and water governance.

Water Management and Water Governance

Water is critical to all human activities, but access to this crucial resource is increasingly limited by competition and the effects of climate change. In agriculture, water management is key to ensuring good and sustained crop yields, maintaining soil health, and safeguarding the long-term viability of the land. Water management is especially challenging on smallholder farms in resource-poor areas, which tend to be primarily rainfed and thus highly dependent on unreliable rainfall patterns. Sustainable practices can help farmers promote the development of soils, plants and field surfaces to allow maximum retention of water between rains, and encourage the efficient use of each drop of water applied as irrigation. Especially useful for farmers’ groups, agricultural extension workers, NGOs, students and researchers working with farmers in dryland areas, this comprehensive yet concise book is a practical and accessible resource for anyone interested in sustainable water management.

Recent Advances in Technology Research and Education

The risks and opportunities of climate change for agriculture can be effectively dealt only by aligning policies, developing institutional capabilities, and investing in infrastructure and farms, as per the experiences of Albania, FYR Macedonia, Moldova, and Uzbekistan.

Methodological guide to reduce carbon and water footprints in
banana plantations

New technologies and assessment methods create improved opportunities to monitor and predict the onset of natural disasters in the era of global warming. Researchers continue to evaluate the changes in weather patterns in order to better understand natural phenomena. Extreme Weather and Impacts of Climate Change on Water Resources in the Dobrogea Region presents a descriptive environmental resource focused on a Romanian region affected by the changing climate. In discussing methods of assessment, monitoring, and prediction, the research included in this publication is an essential resource for policymakers, academicians, researchers, advanced-level students, technology developers, and government officials who wish to expand their research exposure to pertinent topics related to flooding and droughts due to climate change.

Evapotranspiration

Evapotranspiration is a very complex phenomenon, comprising different aspects and processes (hydrological, meteorological, physiological, soil, plant and others). Farmers, agriculture advisers, extension services, hydrologists, agrometeorologists, water management specialists and many others are facing the problem of evapotranspiration. This book is dedicated to further understanding of the evapotranspiration problems, presenting a broad body of experience, by reporting different views of the authors and the results of their studies. It covers aspects from understandings and concepts of evapotranspiration, through methodology of calculating and measuring, to applications in different fields, in which evapotranspiration is an important factor. The book will be of benefit to scientists, engineers and managers involved in problems related to meteorology, climatology, hydrology, geography, agronomy and agricultural water management. We hope they will find useful material in this collection of papers.

Earth Observation for Water Resource Management in Africa

Since the beginning of its formation approximately three billion years ago, the hydrosphere - as an envelope of the terrestrial ellipsoid - has remained constant from a quantitative point of view. The hydrosphere modifies only the ratio of the stretches of the planetary ocean and land, including the proportion of the states of water aggregation: gaseous, liquid, and solid. The hydrological cycle transports only a portion of the hydrosphere, repeats itself annually, and presents itself as a huge planetary plant that for billions of years has operated uninterruptedly on the basis of solar energy and gravity, providing freshwater resources for the maintenance and perpetuation of life beyond the planetary ocean. Water resources are highly influenced by the hydrologic cycle and play a role in agricultural economic development. However, as is shown by the Intergovernmental Panel on Climate Change report, the phenomena of changing climate and land use are set to exacerbate an already serious situation of water supply for various users. In this context, scientific investigations into the issue of the sustainable use of water are timely and important. Improvement of water management involves the accurate estimation of consumptive uses. The purpose of this book is to show the achievements of scientists and academicians all over the world in promoting and sharing new issues on various topics related to evapotranspiration.

Crop Rotation
The Proceeding contains the following sections: i) Groundwater Exploration and Exploitation; (ii) RS&GIS Applications in Water Resources; (iii) Watershed Management: Hydrological, Socio-Economic and Cultural Models; (iv) Water and Wastewater Treatment Technologies; (v) Rainwater Harvesting and Rural and Urban Water Supplies; (vi) Floods, Reservoir Sedimentation and Seawater Intrusion; (vii) Water Quality, Pollution and Environment; (viii) Irrigation Management; (ix) Water Logging and Water Productivity in Agriculture; (x) Groundwater Quality; (xi) Hydrologic Parameter Estimation and Modelling; (xii) Climate Change, Water, Food and Environmental Security; (xiii) Groundwater Recharge and Modelling; (xiv) Computational Methods in Hydrology; (xv) Soil and Water Conservation Technologies.

Sustainable Water Management in Smallholder Farming

Guidelines and Computer Programs for the Planning and Design of Land Drainage Systems

This book gathers the proceedings of the 30th Scientific-Experts Conference of Agriculture and Food Industry, held on September 26-27, 2019, in Sarajevo, Bosnia and Herzegovina. It reports on the application of innovative technologies in food sciences and agriculture, and covers research in plant and animal production, agricultural economics and food production. Further, the book discusses key social and environmental issues, and proposes answers to current challenges. The conference was jointly organized by the Faculty of Agriculture and Food Sciences of the University of Sarajevo, Bosnia and Herzegovina, the Faculty of Agriculture of Ege University, Turkey, the Bosnia and Herzegovina Medical and Biological Engineering Society, and the Faculty of Agriculture of the University of Belgrade, Serbia. The proceedings offer a timely snapshot of cutting-edge, multidisciplinary research and developments in modern agriculture. As such, they address the needs of researchers and professionals, agricultural companies, food producers, and regulatory and food safety agencies.

30th Scientific-Experts Conference of Agriculture and Food Industry

Climate change on earth is having significant impacts on water resources management in Southeast Asia. Knowledge of climate variations and climate change can be valuable for water resources management in agriculture, urban and industrial water supplies, hydroelectric power generation, and ecosystem maintenance. This book presents the findings of case studies on forecasting climate change and its impacts on water availability, irrigation water requirements, floods and droughts, reservoir inflows and hydropower generation, and crop yield in specific basins of Southeast Asian countries such as Thailand, Myanmar, and Vietnam. All case studies start by forecasting the climate change and investigating its impacts by employing several hydrological reservoir simulations and crop water requirement models. The findings provide sound and scientific advice for water managers on the real impacts of climate change and how to adapt to its many challenges.

Sustainable Use of Soils and Water
Management, Performance, and Applications of Micro Irrigation Systems, the fourth volume in the Research Advances in Sustainable Micro Irrigation series, emphasizes sustainable and meaningful methods of irrigation to counter rampant water scarcity. In many parts of the world, this scarcity significantly affects crop yield, crop quality, and, consequently, human quality of life. This important volume presents the best management practices in sustainable micro irrigation, with the goal of increasing crop yield and quality and conserving water. The practices described are practical and attainable and are based on research and studies from many areas of the world, including India, South Africa, and other areas. The applications described can be adapted and applied to many regions with a critical need to address the water crisis in crop production. The practices and applications presented include: • Partial root-zone surface drip irrigation • Effective maintenance techniques • Web-based irrigation scheduling • Water use efficiency methods • The use of flushing and filtration systems 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.

Crop Evapotranspiration

The book is a thorough presentation of theoretical and applied aspects of the evaporation and evapotranspiration process supported by data from experimental studies. It is written in a way that the theoretical background of evaporation and evapotranspiration estimation is presented in a simplified manner, comprehensive to most technical readers. The book deals with details of meteorological parameters and monitoring sensors which are needed for estimating evaporation and evapotranspiration. Errors in meteorological parameter measurements are also presented. Estimation errors, strengths, weaknesses and applicability of a wide range of evaporation and evapotranspiration estimation methods are presented along with samples of application to a certain region. Application of newer simpler methods is presented. A new technology, remote sensing application to evaporation and evapotranspiration estimation, is presented. The latest interest in the subject, climate change and evapotranspiration is presented in the last chapter. This book will be beneficial to students, hydrologists, engineers, meteorologists, water managers and others.

Management of Drip/Trickle or Micro Irrigation

This book covers topics on the basic models, assessments, and techniques to calculate evapotranspiration (ET) for practical applications in agriculture, forestry, and urban science. This simple and thorough guide provides the information and techniques necessary to develop, manage, interpret, and apply evapotranspiration ET data to practical applications. The simplicity of the contents assists technicians in developing ET data for effective water management.

Modelling and Management of Irrigation System

Irrigation is becoming an activity of precision, where combining information collected from various sources is necessary to optimally manage resources. New management strategies, such as big data techniques, sensors, artificial intelligence, unmanned aerial vehicles (UAV), and new technologies in general, are becoming more relevant every day.
As such, modeling techniques, both at the water distribution network and the farm levels, will be essential to gather information from various sources and offer useful recommendations for decision-making processes. In this book, 10 high quality papers were selected that cover a wide range of issues that are relevant to the different aspects related to irrigation management: water source and distribution network, plot irrigation systems, and crop water management.

Extreme Weather and Impacts of Climate Change on Water Resources in the Dobrogea Region

Land, as a fundamental resource in regional development, provides major opportunities for farming, housing, urban planning, and financing. In order to meet the requirements of the new era, every state has developed and implemented a series of policies according to its national specificities and to the international regulations and trends. Geospatial Technologies for Effective Land Governance is a pivotal reference source that provides vital research on the application of the use of GNSS, remote sensing, and GIS. While highlighting topics such as crop management, multispectral images, and irrigation, this publication explores land administration, encompassing both cadastral systems and land registration, as well as the methods of land governance strategies. This book is ideally designed for researchers, agricultural professionals, engineers, environmentalists, land developers, educators, students, and policymakers seeking current research on land and land-based conflicts in urban and rural communities.

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