

节水灌溉



2019 6

中国国家灌溉排水委员会 中国灌溉排水发展中心
武汉大学 国家节水灌溉北京工程技术研究中心

主 办

WATER SAVING IRRIGATION



大禹节水

DAYU WATER-SAVING

股票简称：大禹节水 股票代码：300021

国际灌排委员会（ICID）第一家中国企业成员

「物联网+云技术」 智慧化控制平台

智慧水务



大禹节水集团股份有限公司
Dayu Water-saving Group Co.,Ltd

地址：天津市武清区京滨工业园民旺路10号

电话：022-59679301

传真：022-59679307

<http://www.dyjs.com>

E-mail:dyjs@dyjs.com

ISSN 1007-4929



9 771007 492082

万方数据

目 次

□ 试验研究 □

抽穗期灌溉缓解水稻高温热害的微气象学分析	江晓东 华梦飞 胡 凝 等(1)
基于卷盘式喷灌机的低压双喷枪喷洒水力特征研究	赵海青 吴普特 朱德兰 等(6)
基于氢氧稳定同位素的矮砧苹果树根系吸水深度研究	郭 飞 高 磊 马娟娟(10)
入畦单宽流量对春小麦耗水及其产量的影响研究	黄泽军 黄兴法 张洲笔(14)
麦秸-塑膜复合系统对玉米生长及干物质分配的影响	丁 林 王文娟(18)
微润灌溉条件下不同交替周期对室外辣椒生长的影响研究	陈建琦 申丽霞 王银花 等(22)
新型保水剂施用量对土壤水分和马铃薯生长特性的影响研究	王霞玲 郭凯先 黄佳盛 等(25)
种植模式和补灌对玉米生长发育及产量的影响	方彦杰 秦安振 雍蓓蓓(30)
基于不同环境下的河南省典型区域土壤田间持水量研究	罗清元 杨 丹 刘丽娜 等(35)
微润灌溉对玉米耗水特性及产量的影响研究	王亚竹 王建平(39)
基于博弈论组合赋权的正态云模型在地下水水质评价中的应用	朱志强 唐金平 张 强 等(43)

□ 水环境与水资源 □

汤村水库不同工况下水质模拟	刘勇进 李 红(47)
松嫩平原地下水资源评价区划分析	尉意茹 李治军 戴长雷(51)
银北高水位盐碱地土壤盐分与地下水特征关系分析	樊丽琴 李 磊 吴 霞(55)
贵阳市岩溶地下水水化学特征及水质评价	王亚维 王中美 王益伟 等(60)

□ 工程管理 □

淮北平原基于 ARIMA 模型的冬小麦日土壤水分预测	路 璐 王振龙 杜富慧 等(67)
基于渗漏损失的渠系水利用系数分析	赵瑞珏 王修贵 韩旭东 等(72)
基于物联网系统的甘蔗田间环境数据聚类分析与评价	李 婉 李修华 张云皓 等(77)

□ 工程技术 □

河套灌区渠道衬砌混凝土的纳米颗粒改性研究	曹金保(83)
渠道边坡土壤裂隙网络的 CT 扫描与分形特征研究	刘风华 高 悦 苏永军 等(87)
不同坡度下摆杆式测流仪量水特性的研究	周义仁 石先德(92)

□ 信 息 □

《中国农村水利水电》投稿须知	(82)
摘要编写须知	(91)

Water Saving Irrigation (Monthly)

June 2019

No.6(2019) , Total No.286

Contents

Micrometeorological Analysis of Heat Stress Relieve by Irrigation in Rice at Heading Stage	JIANG Xiao-dong, HUA Meng-fei, HU Ning, et al.(1)
Spraying Hydraulic Performance of Double Travelling Rain Guns for Hose Reel Irrigator under Low Pressure	ZHAO Hai-qing, WU Pu-te, ZHU De-lan, et al.(6)
Water Absorption of Roots of Dwarf Anvil Apple Trees Based on Stable Isotopes of Hydrogen and Oxygen	GUO Fei, GAO Lei, MA Juan-juan(10)
Effects of Unit Width Flux on Water Consumption and Yield of Spring Wheat	HUANG Ze-jun, HUANG Xing-fa, ZHANG Zhou-bi(14)
Effects of Straw-plastic Film Composite System on Maize Growth and Dry Matter Distribution	DING Lin, WANG Wen-juan(18)
Effects of Different Alternating Cycles on the Growth of Outdoor Pepper Based on Moistube Irrigation	CHEN Jian-qi, SHEN Li-xia, WANG Yin-hua, et al.(22)
Effects of The Application Amount of The New Water-retaining Agent on Soil Moisture and Potato Growth Characteristics	WANG Xia-ling, GUO Kai-xian, HUANG Jia-sheng, et al.(25)
Effects of Planting Pattern and Supplemental Irrigation on Dryland Maize Growth and Yield	FANG Yan-jie, QIN An-zhen, YONG Bei-bei(30)
Study on Soil Field Water Capacity in Typical Regions of Henan Province under Different Environments	LUO Qing-yuan, YANG Dan, LIU Li-na, et al.(35)
Effect of Micro-irrigation on Water Consumption and Output of Corn	WANG Ya-zhu, WANG Jian-ping(39)
Application of Normal Cloud Model Based on Game Theory Combined Weighting in Groundwater Quality Evaluation	ZHU Zhi-qiang, TANG Jin-ping, ZHANG Qiang, et al.(43)
Water Quality Simulation of Tangcun Reservoir under Different Conditions	LIU Yong-jin, LI Hong(47)
Analysis of the Division of Groundwater Resources Assessment in Songnen Plain	WEI Yi-ru, LI Zhi-jun, DAI Chang-lei(51)
Relationship between Soil Salinity and Groundwater Characteristics in Saline-alkali Land with High Groundwater Level of Yinbei Irrigation Area	FAN Li-qin, LI Lei, WU Xia(55)
Hydrochemical Characteristics and Water Quality Evaluation of Karst Groundwater in Guiyang	WANG Ya-wei, WANG Zhong-mei, WANG Yi-wei, et al.(60)
Prediction of Daily Soil Moisture of Winter Wheat Based on ARIMA Model in Huaibei Plain	LU lu, WANG Zhen-long, DU Fu-hui, et al.(67)
Canal Water Utilization Coefficient Analysis Based on Leakage Loss	ZHAO Rui-jue, WANG Xiu-gui, HAN Xu-dong, et al.(72)
Cluster Analysis and Evaluation of Sugarcane Field Environmental Data Based on IoT System	LI Wan, LI Xiu-hua, ZHANG Yun-hao, WEN Biao-tang, et al.(77)
Study on Nano-particle Modification of Canal Lining Concrete in Hetao Irrigation Area	CAO Jin-bao(83)
Study on Crack Structure and Fractal Characteristics of Soil in Canal Slope Based on CT Scanning Tests	LIU Feng-hua, GAO Yue, SU Yong-jun, et al.(87)
Research on Water Measurement Characteristics of Pendulum-rod Flowmeter with Different Slope	ZHOU Yi-ren, SHI Xian-de(92)

Competent Authorities: Ministry of Water Resources

Sponsor: Chinese National Committee on Irrigation and Drainage
China Irrigation and Drainage Development Centre
Wuhan University

National Center of Efficient Irrigation Engineering and Technology Research-Beijing

Publisher and editor: Editorial Department of Water Saving Irrigation
(Wuhan University, Wuhan, 430072, China)

Editor in Chief: Cui Yuanlai **Distribute Scope:** Worldwide

Domestic Subscription: Every Post Office in China

E-mail: jieshuiguangai@188.com

Homepage: [http:// www.irrigate.com.cn](http://www.irrigate.com.cn)

万方数据