

灌溉排水学报

GUANGAI PAISHUI XUEBAO

2025年 第44卷 第1期(月刊)

目 次

•专家评述•(栏目主编: 杜太生 王景雷 左其亭)

河道外需水量影响因素及预测方法综述何艳虎, 徐小迪(1)

•作物水肥高效利用•(栏目主编: 赵西宁 杨士红)

干旱区枣林水碳通量及水分利用效率研究乔英, 王环波, 陈云飞, 等(8)

基于土壤水分下限和作物耗水强度优化玉米阶段灌水量梁雪, 薛冰, 李芳芳, 等(17)

水钾耦合对南疆滴灌枣树叶片生理特征及产量的影响孙世豪, 艾鹏睿, 马英杰, 等(25)

水氮调控对多年生黑麦草生长特性和产量的影响段科龙, 牛最荣, 张真荣, 等(34)

基于无人机遥感的春玉米产量预测研究马世骄, 房城泰, 赵经华, 等(43)

•灌排工程与技术装备•(栏目主编: 王振华 唐学林)

等截面双作用柱塞泵的仿真与试验研究朱梅, 范舟, 李晓乐, 等(50)

基于改进NSGA-II算法的加压滴灌管网优化设计樊凯, 霍雪飞, 王文斌, 等(59)

•农业生态环境工程•(栏目主编: 徐俊增 周蓓蓓)

葡萄糖添加量与曝气时间对垂直潜流人工湿地脱氮的影响王明宽, 童菊秀, 张霞(66)

4年单季生物炭与秸秆还田对潮土土壤团聚体及有机碳影响马新雨, 刘子剑, 孙树臣, 等(74)

地下水埋深和林分结构对胡杨林下草本植物多样性的影响李佳, 魏新成, 吕慧, 等(82)

不同改良剂对盐渍土壤的综合改良效应研究马馥扬, 曹巍巍, 彭昊, 等(89)

•农业水管理•(栏目主编: 胡笑涛 李彦彬)

未来气候情景下黑河中游灌溉缺水风险评估吴子晗, 章孙逊, 张帆, 等(97)

基于系统动力学模型的干旱区农业节水潜力计算徐凯, 岳耀先, 雷波, 等(104)

Journal of Irrigation and Drainage

Vol.44 No.1 2025(Monthly)

Contents

•Review and opinion•(Column editor in chief: DU Taisheng WANG Jinglei ZUO Qiting)

A review of the determinants and prediction methods for off-channel water demand

.....HE Yanhu, XU Xiaodi(1)

•Efficient use of water and fertilizers by crops•(Column editor in chief: ZHAO Xining YANG Shihong)

Dynamics of water-carbon fluxes and water use efficiency in jujube orchards in arid regions

.....QIAO Ying, WANG Huanbo, CHEN Yunfei, et al.(8)

Optimizing irrigation scheduling for maize based on soil moisture threshold and water consumption intensity

.....LIANG Xue, XUE Bing, LI Fangfang, et al.(17)

The combined effect of water and potassium on physiological traits of jujube leaves and fruit yield under drip irrigation in

Southern XinjiangSUN Shihao, AI Pengrui, MA Yingjie, et al.(25)

Optimal irrigation and nitrogen fertilization for growth and yield of perennial ryegrass (*Lolium perenne*)

.....DUAN Kelong, NIU Zuirong, ZHANG Zhenrong, et al.(34)

Predicting spring maize yield using UAV remote sensing

.....MA Shijiao, FANG Chengtai, ZHAO Jinghua, et al.(43)

•Irrigation and drainage engineering and technical equipment•(Column editor in chief: WANG Zhenhua TANG Xuelin)

Numerical and experimental analysis of double-acting plunger pump with constant cross section

.....ZHU Mei, FAN Zhou, LI Xiaole, et al.(50)

Optimizing pressurized drip irrigation pipe network design using an improved NSGA-II algorithm and engineering depreciation

cost methodFAN Kai, HUO Xuefei, WANG Wen'e, et al.(59)

•Agroecological environment engineering•(Column editor in chief: XU Junzeng ZHOU Beibei)

Optimizing nitrogen removal in vertical - flow constructed wetland: Effect of glucose addition and aeration duration

.....WANG Mingkuan, TONG Juxiu, ZHANG Xia(66)

Enhanced soil aggregation and soil organic carbon in fluvo-aquic soil through continuous application of biochar and straws

.....MA Xinyu, LIU Zijian, SUN Shuchen, et al.(74)

Influence of groundwater depth and stand structure on diversity of the understory herbaceous plants in *Populus euphratica* forests

.....LI Jia, WEI Xincheng, LYU Hui, et al.(82)

The effect of different soil amendment agents on physical and chemical properties of saline soils

.....MA Fuyang, CAO Weiwei, PENG Hao, et al.(89)

•Agricultural water management•(Column editor in chief: HU Xiaotao LI Yanbin)

Assessing irrigation water shortage in the middle reaches of the Heihe River Basin under future climate scenarios

.....WU Zihan, ZHANG Sunxun, ZHANG Fan, et al.(97)

Calculating agricultural water-saving potential in arid areas using system dynamic model

.....XU Kai, YUE Yaoxian, LEI Bo, et al.(104)