

园艺—研究报告

温室栽培基质耗水量与环境因子相关性的研究

李珊¹, 马丽丽², 贺超兴², 闫妍²

- 1.
2. 中国农业科学院蔬菜花卉研究所

摘要:

为指导温室精确灌溉, 对温室内气温、湿度、光照与不同栽培基质水分蒸发量进行了回归分析, 根据纯水日蒸发量回归分析了不同栽培基质的水分日蒸发量, 并使用BP神经网络对番茄需水量进行模拟。结果表明回归方程法能够较为准确地模拟日光温室水日蒸发量和基质水分日蒸发量, 使用温室水蒸发量对未种植作物的园田土基质蒸发的回归模拟能取得较好的结果, 而使用BP人工神经网络能够较好地种植番茄的园田土水分日消耗量进行模拟。

关键词: BP人工神经网络

Simulation Study between Water Evaporation of Cultivation Substrate and Environmental Factor of Greenhouse

Abstract:

For guiding precise irrigation in greenhouse, the environment factors such as air temperature, humidity and light were taken to establish regression models with water evaporation amount in cultivate substrates. The evaporation amount of water in greenhouse was used to forecast amount of evaporation of other cultivated substrates. Water consumption of tomato plants was simulated using BP neural network for its non-linear. Tap water evaporation can be used to instruct irrigation and BP neural network is suitable for plant water consumption simulation, and farmers can make use of all of them simply and cheaply.

Keywords: BP neural network

收稿日期 2010-07-28 修回日期 2010-09-09 网络版发布日期 2011-04-15

DOI:

基金项目:

广西农科院科技发展基金

通讯作者: 李珊

作者简介:

作者Email: leeshann@yahoo.cn

参考文献:

本刊中的类似文章

扩展功能

本文信息

- Supporting info
- PDF(785KB)
- [HTML全文]
- 参考文献[PDF]
- 参考文献

服务与反馈

- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- 引用本文
- Email Alert
- 文章反馈
- 浏览反馈信息

本文关键词相关文章

- BP人工神经网络

本文作者相关文章

- 李珊
- 马丽丽
- 贺超兴
- 闫妍

PubMed

- Article by Li,s
- Article by Ma,L.L
- Article by He,T.X
- Article by Yan,y