

工程与应用

CFW的CBR动态预测

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摘要 结合CBR (Case-Based Reasoning, 基于案例推理) 方法学, 探索了CFW (Cucumber Fusarium Wilt, 黄瓜枯萎病) 动态预测技术。提出一种优势案例机制辅助案例检索, 快速定位相似案例集以提高检索效率, 并借助灵敏度分析思想确定最优相似案例。对遍历检索及基于优势案例机制的检索进行了对比分析, 确定了系统案例库的最优分类数范围。利用交叉验证方法, 对每个测试案例进行准确度及联想特性值评价, 得出不同相异阈值下推理算法的推理有效性, 并依此确定了系统案例检索的最优相异阈值。

关键词 [基于案例推理](#) [黄瓜枯萎病](#) [动态预测](#)

分类号

CBR dynamic forecast for CFW

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Abstract

This research presents a method for Cucumber Fusarium Wilt (CFW) dynamic forecast combining Case-Based Reasoning (CBR) methodology. A case indexing mechanism guided by idea of vantage case is developed to rapidly generate a similar case set for a new case and speed up case retrieval process, and an idea of sensitivity analysis for determining optimal similar case is used to construct the reasoning algorithm in this CBR forecast system. By analyzing performances of the exhaustive search and the search using proposed indexing mechanism, the range of optimal cluster number for this application is inferred. The precision and recall evaluations are conducted for each testing case using the X fold cross-validation approach, the reasoning effectiveness employing different thresholds of dissimilarity distance (R) is figured out and the optimal R for this CBR system is determined.

Key words [Case-Based Reasoning \(CBR\)](#) [Cucumber Fusarium Wilt \(CFW\)](#) [dynamic forecast](#)

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