

FOSTERING INFORMED DECISION-MAKING FOR CITRUS GROWERS: A RESEARCH PROJECT DATABASE TO COMBAT HUANGLONGBING (HLB) DISEASE

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Citrus growers in the United States, particularly in Florida, Texas, and California, are facing severe challenges due to Huanglongbing (HLB). Consequently, research efforts to mitigate the impact of this disease have intensified over the past 14 years. However, a gap remains in synthesizing and effectively communicating these research findings to growers, hindering their access to crucial knowledge and the latest advancements in HLB management. To address this gap, our project aims to develop a comprehensive database that provides growers and the public with objective information sourced from USDA-funded research projects. The first step in this initiative involved compiling 578 research grants supported by the Agricultural Research Service (ARS), the National Institute of Food and Agriculture (NIFA), and multiagency programs. We then analyzed their basic information using text mining techniques. By discerning the underlying structures, redundancies, interests, emphasis, and potential information gaps of grants, we aim to tailor and further enrich our database to meet actual agency and grower needs. So far, we have identified three major topics in HLB-research: 1. Disease or vector management, 2. The development of new strategies to control the disease or the vector and 3. Monitoring (identification, detection, and evaluation). Although most topics have been equitably addressed, ARS emphasized topics like innovation, resistance, and tolerance, while NIFA has prioritized integrated management, production, and sustainability. Multiagency initiatives have prioritized projects according to location and state needs. For example, monitoring initiatives are more relevant in California, while Florida invests heavily in control and management. To our knowledge, this work represents a pioneering effort to use research grants to guide the building of a database that bridges the gap between producers and research outcomes. This initiative empowers informed decision-making based on the most relevant research aimed at mitigating the adverse impacts of HLB on citrus crops.

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