

ABSTRAK

Perkembangan teknologi informasi mendorong modernisasi berbagai sektor, termasuk perkebunan. Dinas Perkebunan Provinsi Sumatera Selatan melalui UPTD Balai Proteksi Tanaman Perkebunan (BPTP) masih menggunakan metode manual dalam pelaporan dan pengendalian hama serta penyakit tanaman, yang menyebabkan keterlambatan dan ketidakefisienan dalam pengambilan keputusan. Penelitian ini bertujuan merancang dan membangun Sistem Pendukung Keputusan (SPK) berbasis web untuk identifikasi dan pengendalian hama menggunakan metode *Weighted Product (WP)* serta pendekatan *Rapid Application Development (RAD)*. Sistem dirancang agar dapat mengelola data secara terstruktur, melakukan perhitungan berdasarkan bobot kriteria, serta memberikan rekomendasi pengendalian secara cepat dan tepat. Hasil implementasi menunjukkan bahwa sistem mampu mempercepat proses pencatatan, analisis, dan pengambilan keputusan. Komoditas karet menjadi prioritas utama pengendalian berdasarkan hasil pemeringkatan metode WP. Sistem ini terbukti meningkatkan efektivitas dan efisiensi pengendalian hama di sektor perkebunan Sumatera Selatan.

Kata kunci: Sistem Pendukung Keputusan, *Weighted Product*, RAD, Hama Perkebunan, Dinas Perkebunan.

ABSTRACT

The advancement of information technology has driven modernization across various sectors, including agriculture. The Plantation Office of South Sumatra Province, through the UPTD Plantation Plant Protection Center (BPTP), still relies on manual methods for reporting and controlling plant pests and diseases. This results in delays and inefficiencies in decision-making. This study aims to design and develop a web-based Decision Support System (DSS) for pest identification and control using the Weighted Product (WP) method and the Rapid Application Development (RAD) approach. The system is designed to manage data in a structured manner, perform calculations based on weighted criteria, and provide fast and accurate control recommendations. Implementation results show that the system facilitates the process of recording, analysis, and decision-making. Rubber is identified as the top priority for pest control based on the WP ranking results. This system has proven to enhance the effectiveness and efficiency of pest control in the plantation sector of South Sumatra.

Keywords: *Decision Support System, Weighted Product, RAD, Plantation Pests, Plantation Office.*