

**RANCANG BANGUN SISTEM INFORMASI
PENCATATAN TERNAK (SI-PATEN) BERBASIS WEBSITE
(Studi Kasus: BUMDES Dwi Amertha Sari)**

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ABSTRAK

BUMDES Dwi Amertha Sari mengelola program ternak yang saat ini masih menghadapi kendala operasional akibat sistem pencatatan manual, duplikasi pekerjaan, dan risiko kesalahan data. Penelitian ini mengembangkan Sistem Informasi Pencatatan Ternak (SI-PATEN) berbasis *website* guna mendigitalisasi proses pencatatan, pengelolaan data anggota, serta pengarsipan laporan secara terintegrasi. Metode pengembangan sistem menerapkan model *Waterfall* yang dijalankan secara terstruktur melalui fase analisis kebutuhan, desain, implementasi, pengujian, *deployment*, dan pemeliharaan. Sistem tersebut dikembangkan menggunakan bahasa pemrograman PHP dengan basis *framework* Laravel dan basis data MySQL. Pengujian kualitas perangkat lunak dilakukan secara komprehensif menggunakan metode *Black Box* untuk fungsionalitas, *White Box* guna memverifikasi logika internal, dan *Alpha Testing* untuk validasi *user*. Hasil penelitian menyatakan bahwa seluruh fitur berjalan selaras dengan kebutuhan fungsional, dengan hasil *Alpha Testing* mencapai tingkat keberhasilan 100%. Dengan demikian, implementasi SI-PATEN terbukti layak digunakan untuk memfasilitasi administrasi yang lebih akurat, efisien, serta mendukung pembuatan dan ekspor laporan perkembangan ternak secara otomatis.

Kata Kunci: Sistem Informasi, Pencatatan Ternak, *Waterfall*, Framework Laravel, *Alpha Testing*

***DESIGN AND IMPLEMENTATION OF A WEB-BASED
LIVESTOCK RECORDING INFORMATION SYSTEM
(SI-PATEN)***

(Case Study: BUMDES Dwi Amertha Sari)

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ABSTRACT

BUMDes Dwi Amertha Sari manages a livestock program that currently faces operational challenges due to manual recording systems, work duplication, and the risk of data inaccuracies. This study develops a web-based Livestock Recording Information System (SI-PATEN) to digitalize the recording process, manage member data, and integrate report archiving. The system development employed the Waterfall model, which was implemented in a structured manner through the phases of requirements analysis, system design, implementation, testing, deployment, and maintenance. The system was developed using PHP with the Laravel framework and MySQL as the database. Software quality testing was conducted comprehensively using Black Box testing to evaluate functionality, White Box testing to verify internal logic, and Alpha Testing for user validation. The results indicate that all system features operate in accordance with functional requirements, with Alpha Testing achieving a 100% success rate. Therefore, the implementation of SI-PATEN is proven to be feasible for facilitating more accurate and efficient administration, as well as supporting the automatic generation and export of livestock development reports.

Keywords: *Information System, Livestock Recording, Waterfall, Laravel Framework, Alpha Testing*