

UTILIZATION OF MOBILE TECHNOLOGY TO MEASURE PERFORMANCE INDEX IN BEAUTIFUL CORAL FARMS

NORFAJRIYAH

*Informatics Study Program, Faculty of Science & Technology,
Yogyakarta University of Technology
Jl. North Ringroad Jombor Sleman Yogyakarta
E-mail: nrfajriyah080603@gmail.com*

ABSTRACT

The escalating consumption of broiler chicken meat in Indonesia has prompted farmers to enhance their efficiency and productivity. This study aims to design a mobile-based recording system for Karang Indah Farm, located in Tanah Bumbu, that can calculate the performance index. The performance index is determined by depletion, average body weight (ABW), feed conversion ratio (FCR), and average harvest age. The performance index value categories are as follows: less (<300), sufficient (301-325), good (326-350), very good (351-400), and excellent (>400). The system was developed using Kotlin for Android applications and Laravel for websites, with REST API integration using Retrofit. The system incorporates various features, including the capacity to record incoming chickens, track their development, monitor their health, manage their feed, process sales, and calculate the performance index. The system's efficacy was validated through a rigorous black box testing process and a comparison with manual calculations derived from five distinct datasets. The results of this comparison revealed category variations 286 (less), 291.06 (less), 315.97 (sufficient), 356.99 (very good), and 411.18 (excellent). Consequently, this system enhances recording efficiency, mitigates the risk of data loss, and furnishes a comprehensive evaluation of farm performance, facilitating informed decision-making.

Keywords: *Performance Index, Mobile, Chicken Farming, REST API, Kotlin, Laravel*