

ABSTRAK

Daging ayam broiler merupakan salah satu sumber protein di Indonesia sering menghadapi masalah dalam rantai pasok yang dapat memengaruhi kualitas dan keamanannya. Penelitian ini bertujuan untuk merancang sistem penelusuran rantai pasok ayam broiler berbasis blockchain untuk meningkatkan transparansi dan integritas data. Penelitian ini dilatarbelakangi oleh masalah pemalsuan, dan malpraktik daging ayam serta kecurangan harga yang sering terjadi dalam distribusi daging ayam broiler. Metode penelitian yang digunakan meliputi penerapan blockchain pada sistem penelusuran menggunakan metode pengembangan Agile dan pengujian fungsionalitas melalui blackbox, pengujian latensi dan *gas fee* serta pengujian QR code pada batch Id untuk melakukan pelacakan produk. Temuan penelitian menunjukkan bahwa sistem penelusuran berbasis blockchain memungkinkan pelacakan asal-usul daging ayam broiler dari produsen hingga retailer secara transparan dan aman. Penerapan blockchain meningkatkan integritas dan keamanan data yang memberikan konsumen dan pelaku industri kemampuan untuk memverifikasi keaslian produk secara langsung.

Kata kunci: ayam broiler, *blockchain*, rantai pasok, sistem penelusuran.

ABSTRACT

Broiler chicken meat, one of the main sources of protein in Indonesia, often faces issues in the supply chain that can affect its quality and safety. This study aims to design a blockchain-based broiler chicken supply chain traceability system to enhance transparency and data integrity. The study is motivated by issues such as meat adulteration, malpractice, and price fraud, which frequently occur in the distribution of broiler chicken meat. The research methodology includes the implementation of blockchain in the traceability system using the Agile development method, and functionality testing through blackbox testing, latency and gas fee testing, as well as QR code testing on batch IDs for product tracking. The findings of the study indicate that the blockchain-based traceability system enables transparent and secure tracking of the origin of broiler chicken meat from producers to retailers. The implementation of blockchain enhances data integrity and security, providing consumers and industry players with the ability to directly verify the authenticity of products.

Keywords: broiler chicken, blockchain, supply chain, traceability system.