Smart Agri-Trade Platform using Block Chain And Cloud-Computing

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Abstract: *The agricultural supply chain suffers from critical inefficiencies including lack of transparency, delayed market access, and pricing manipulation, largely due to reliance on centralized systems. This paper presents a smart agri-trade platform that integrates block chain and cloud computing technologies to enable real-time market connectivity, data integrity, and fair pricing for stakeholders such as farmers, distributors, and consumers. The platform leverages cryptographic hashing, distributed ledgers, and cloud-based data synchronization to ensure secure and tamper-proof transactions. Smart contracts automate product verification and authentication processes, while a chatbot-based advisor enhances user interaction by providing real-time assistance. The proposed solution reduces dependency on intermediaries, enhances traceability, and fosters trust across the agricultural ecosystem. Test results validate the platform's reliability, responsiveness, and effectiveness in addressing traditional supply chain challenges. The architecture and implementation of this platform offer a scalable and transparent model for future agri-tech innovations.*

Keywords: Block chain, Cloud Computing, Agricultural Supply Chain, Real-time Pricing, Traceability