

# Blockchain in Agriculture Supply Chain Management

Miss. Harshika Madan Rupwate<sup>1</sup>, Miss. PrajктаBhaskarPardhi<sup>2</sup>,  
Miss. Sanika Rajendra Patil<sup>3</sup>, Miss. Snehal Santosh Sawakhande<sup>4</sup>

Department of Computer Engineering<sup>1-4</sup>

Loknete Gopinathji Munde Institute of Engineering Education and Research, Nashik

**Abstract:** *The rise in the number of brokers has led to price increases in the agricultural goods market. These intermediaries purchase products from farmers at reduced prices and resell them to consumers at a higher rate. This practice disadvantages farmers, while consumers end up paying excessive prices for essential goods. This study proposes the development of an e-commerce mobile and web application called 'e-Farmers' Hut' to enable direct interaction between producers and consumers. The goal of the application is to maximize benefits for both farmers and customers by eliminating the role of middlemen. Both the mobile and web platforms share a common database, with separate profiles for farmers and customers, where they can submit relevant information. Additionally, the platform incorporates an electronic payment system to optimize convenience. Customers can browse lists of available products posted by verified farmers. The application has successfully passed the testing phase, delivering expected results. This technology has the potential to significantly streamline direct sales and purchases of agricultural products between farmers and consumers. It is not practical for farmers to reach all merchants in person due to the significant time and effort involved, especially given the limited time farmers have, traditional methods have restricted their access to a broader range of clients (merchants). This has resulted in fewer opportunities for farmers to sell their crops in the market. By integrating a blockchain-based marketing system, farmers can sell their products at various stages of the supply chain—whether to merchants, markets, or directly to end consumers—while having access to multiple selling options. This new approach ensures transparency, enhances trust, and allows farmers to reach a wider market efficiently without the need for intermediaries.*

**Keywords:** Databases, Market research, Agricultural products, Electronic commerce, Informatics, Consumer electronics