Bilateral Exchange System for Fresh Produce Selling using Auction Simulator

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Abstract: *Fresh products (such as produce, meats and seafood, etc.) are a necessity of life, and, as such, play a pivotal role in human evolution. Traditional selling systems often rely on local markets and direct sales, limiting the reach to a specific geographic area. Producers often rely on middlemen or local distributors in traditional systems, which can lead to reduced profit margins for farmers. Maintaining consistent quality throughout the supply chain can be challenging in traditional systems. Fresh produce has a limited shelf life, and maintaining its freshness throughout the supply chain is crucial. Short shelf life requires quick turnover, and any delays in transportation or storage can lead to spoilage, resulting in losses for producers. Producers may lack access to market intelligence and information on pricing trends, demand forecasts, and emerging consumer preferences. Addressing these problems this project develops a truthful and efficient Double Auction mechanism for produce trading systems.In the context of fresh produce selling, a double auction system proves invaluable as it allows both Procures and Producers to actively engage in the market dynamics. In this trading system, an e-commerce platform acts as the auctioneer, organizing and overseeing an auction between procurers and growers. Procurers submit bids, and the auctioneer confirms and halts the auction. Winners are then announced along with the final prices. Winning procurers obtain allocated produce and make payments, while growers receive payment and provide the produce according to the allocation results.*

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