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## **DEVELOPMENT OF INTEGRATED LOGISTICS SYSTEMS FOR THE TRANSPORTATION OF AGRICULTURAL PRODUCTS IN THE CONTEXT OF GLOBAL SUPPLY CHAINS**

In the context of the globalization of agri-food markets and increasing demands for supply chain efficiency, the development of integrated logistics systems for the transportation of agricultural products in Ukraine is becoming not merely a technical challenge but a strategic factor in maintaining competitiveness in global markets. The fragmentation of transport infrastructure, warehouse capacity, information systems, and customs procedures, combined with uneven coordination among stakeholders, complicates the development of a comprehensive approach to optimizing multimodal transport. The lack of a systematic analysis of the interaction between modes of transport, product quality preservation requirements, and management mechanisms limits the possibilities for sound planning of logistics corridor development. The purpose of this article is a comprehensive study of the formation of integrated logistics systems for the transportation of agricultural products in Ukraine within the context of global supply chains. The article identifies the key components of integrated logistics systems – transport infrastructure, warehousing capacity, information systems, and customs procedures—and assesses the main challenges for each. It analyzes the geographical and geopolitical factors affecting the stability of logistics corridors, as well as the role of digitalization (GPS tracking, blockchain, automated warehouse management systems, predictive analytics) in increasing the transparency and efficiency of supply chains. Multimodal transport strategies are examined, highlighting the advantages, typical use cases, and infrastructure requirements for rail, road, sea, and river transport. Special attention is given to cold chain management for perishable goods, the implementation of international quality standards (ISO 22000, GlobalGAP), and traceability systems. Key stakeholders – from agricultural producers to financial institutions – have been systematized, with their roles, interests, and coordination mechanisms defined. The strategic priorities for development are the modernization of railway and port infrastructure, the creation of domestic logistics centers, the implementation of digital platforms, the diversification of export routes, and the development of value-added capacities, which together will enable Ukraine to strengthen its position as a reliable global supplier of agricultural products.

**Keywords:** integrated logistics systems, agricultural products, global supply chains, multimodal transport, digitalization of logistics, cold chain, stakeholders, transport infrastructure, quality standards, traceability.