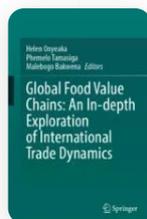


The Role of Technology in Mitigating Scarcity in Global Food Value Chains

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[Global Food Value Chains: An In-depth Exploration of International Trade Dynamics](#)

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 76 Accesses

Abstract

Global food value chains (GFVCs) are under increasing strain from climate change, population growth, resource depletion, and geopolitical disruptions, intensifying the risks of food scarcity. This chapter examines the pivotal role of technology in mitigating scarcity by enhancing efficiency, resilience, and sustainability across production, processing, distribution, and consumption stages. Technological innovations—including precision agriculture, artificial intelligence, Internet of Things (IoT), big data analytics, cold chain logistics, and automation—are transforming food systems by improving yields, reducing