Production, trade and future prospects of tropical tuber crops

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Tropical tuber crops such as cassava, sweet potatoes and elephant foot yam play vital roles in global food security and economic development, particularly in developing nations. The present study examines the current scenario of tuber crop production and trade dynamics, focusing on India's role both as a producer and an exporter. Using empirical data from various sources including Food and Agriculture Organization of the United Nations and Agricultural and Processed Food Products Export Development Authority, the study analyses production trends, trade patterns and policy frameworks, to elucidate potential pathways for enhancing productivity, sustainability and competitiveness in the tuber crops sector. The analysis reveals significant growth in cassava and sweet potato production globally, with India emerging as a key player. However, climate change, pests and diseases, soil degradation, and trade barriers pose hurdles to the growth of the sector. This study also recommends comprehensive strategies, including climate-resilient agricultural practices, integrated pest management, soil health enhancement and infrastructure development, to address these challenges and promote the sustainable growth of tuber crops.

Keywords: Agricultural resilience, climate change, food security, production trends, trade dynamics, tuber crops.

Globally, these crops are cultivated across diverse regions, contributing significantly to food security, income generation and rural livelihoods. The production landscape of tuber crops exhibits noteworthy trends, with countries like Nigeria, China and India emerging as key players in their cultivation and trade. With its extensive cultivation across Africa, Asia and the Americas, cassava stands out as one of the most widely grown tuber crops globally. Its versatility and ability to thrive in diverse agroecological conditions have positioned cassava as a crucial staple for millions of people worldwide[2,3]. Similarly, sweet potatoes, predominantly cultivated in Africa and Asia, are pivotal in addressing nutritional deficiencies and enhancing food security in these regions[4]. Elephant foot yam, though less widespread, has witnessed significant growth in cultivation in countries like India, contributing to both dietary diversity and economic prosperity. The trade dynamics of tuber crops further underscore their significance in the global agricultural landscape. India, for instance, emerges as a notable exporter of tuber crops, including cassava, sweet potatoes and yams, catering to diverse international markets. Conversely, the country also imports cassava starch and sweet potatoes to meet domestic demand and supplement its agricultural production. However, the production and trade of tuber crops are