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ORIGINAL RESEARCH

Digitalization as a key driver for sustainable food system transformation: The case of *Soluta-ag* in Busia and Bungoma, Kenya

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Abstract

Background: Suboptimal diet is responsible that one-third of the world's population suffers from malnutrition. However, in cities, current food systems cannot guarantee sustainable availability, accessibility and affordability of nutritious foods for the entire population. Digitalization can be a key driver for sustainable food system transformation for better outcomes in food and nutrition.

Objective: In the frame of the Nutrition in City Ecosystems (NICE) project connecting the demand and supply of urban food systems, 16'000 Kenyan farmers should be connected to specific marketplaces in Busia and Bungoma, Western Kenya, using the *Soluta-ag* digital tool in order to improve availability, accessibility and affordability of nutritious foods for urban consumers.

Results: In NICE, the Farmers' Hub social business model is applied to increase the production of nutritious and agroecologically produced foods. Farmers' Hubs are 'one-stop-shops' offering a range of services to farmers, e.g., access to quality inputs, mechanization, advisory services and a market place for sale for produce contributing to better dietary quality. The *Soluta-ag* application supports buying and selling activities of the Farmers' Hubs, provides data-driven insights on market trends, and monitors Farmers' Hubs performance for more informed decisions. Since the initiation of the NICE project in
2021, 92 NICE Farmers' Hubs owners serving 10,528 farmers have been trained on the utilization of *Soluta-ag* in Busia and Bungoma and transacting an average of KES 100,000 per month via *Soluta-ag* between January to April 2023.

Conclusion: Close connection between all food systems stakeholders and evidence-based data for decision-making are key for sustainable food system transformation. A sustainable and equitable food system is a priority to tackle nutrition challenges in city ecosystems. Digitalization can play a key role in these processes. *Soluta-ag,* applied and introduced to foster production of nutritious and agroecologically produced food in secondary cities and to better link producers and consumers clearly contributes to an increased availability, accessibility, and affordability of nutritious foods for city populations through improved connection of farmers' produce to markets ensuring fair prices for all involved.

Key words

Nutritious and agroecologically produced foods, digitalization, city ecosystems, social business model, *Soluta-ag*