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Innovative solutions for food security: Examining the nutritive gardens systems in Burkina Faso

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Abstract

Burkina Faso, like many West African nations, is grappling with the adverse impacts of climate change, particularly evidenced through increasing occurrences of extreme weather events, notably droughts. Yet, the country's agricultural systems possess low resilience against these additional stressors. Consequently, there is an urgent need for straightforward, efficient, and cost-effective approaches to address this issue. One promising strategy is the implementation of so-called "Jardin Nutritif" or "Nutritive Garden", which focus on the intensive cultivation of *moringa* and baobab trees.

Nutritive gardens aim to improve the nutritional status, food security, and income of impoverished rural households. These gardens cultivate baobab and *moringa* plants, primarily for their nutrient-rich leaves. Baobab leaves, renowned for their high nutritional content, contain essential minerals and proteins crucial for vulnerable groups such as pregnant women and children. *Moringa* leaves, similarly nutritious, are rich in vitamins and minerals and are widely consumed across Africa.

The setup process, applying agroecological practices, typically overseen by a local forestry department technical officer, involves negotiations with landowners, demarcating the 1,5 m × 3 m planting plots, soil preparation, and seed sowing. Each planting bed is exclusively dedicated to a single species, alternating between the two types. Once established, these gardens are typically managed by women's groups, who divide the responsibility for individual beds, but help each other out. Harvesting occurs approximately 45 days after sowing, with yields sold locally or processed for added value. Numerous NGOs have taken up this unique production system in their local projects, in particularly, the British NGO Tree Aid has set up over 200 nutritive gardens since 2017.

Evaluation sessions conducted with women's groups identified several benefits of nutritive gardens, including economic empowerment, food security enhancement, improved health outcomes, and social cohesion. However, challenges such as water availability, market reliability, and equipment deficiencies.

To enhance and expand this innovative system, NGOs and government bodies need to provide ongoing support beyond the initial setup phase, addressing challenges related to water availability, market access, and processing equipment. Identifying reliable buyers, exploring value-added products, and enhancing financial stability through cooperatives are crucial steps for the long-term sustainability of nutritive gardens.

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