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## Exploring Factors Critical to Innovation of Urban Cabbage Production in Cotonou (Benin), Accra (Ghana) and Ouagadougou (Burkina Faso)

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### Abstract

Urban vegetable production is an important economic activity in metropolises of developing countries, including the West African cities of Cotonou (Benin), Accra (Ghana) and Ouagadougou (Burkina Faso). In these cities, growing local demand for fresh produce stimulates the commercial production of high value vegetables.

Farmers respond by establishing commercial crops and, facing increasing pest pressure, apply synthetic pesticides as a standard strategy to reduce the risk of harvest losses. Scientists and local experts have expressed concern about abuse, misuse and overuse of pesticides that put both farmers and consumers at risk. Consequently, a need for innovation towards risk-reduced vegetable production and marketing was identified.

We define innovation as a creative process of varying, selecting and incorporating knowledge by a multitude of stakeholders. This process can yield a diversity of changes (outcomes of the innovation process). We hypothesised that innovation will occur only if farmers perceive a need for change. This study investigates which changes in general have occurred in the past several years, how farmers obtained the necessary knowledge and why certain technologies and processes were innovated.

In each city, we implemented research question-led PRA workshops at two urban production sites. For that purpose, we drew a purposive sample of 15 cabbage growers at each site; five of the participants of each workshop were later interviewed using a semi-structured questionnaire, which was informed by the workshop results. These results included innovation histories and innovation system maps.

We analyse the dataset applying qualitative content analysis, employing a hypothesis coding strategy. Preliminary results suggest that farmers readily select and integrate new varieties and new pesticides in the production process. Principal factors positively influencing innovation were found to be directly observable benefits and adaptability of a technology to the local environment.

By comparing the country cases, the lessons of this study will contribute to the understanding of urban cabbage production systems, and of factors critical to innovation in such systems in West Africa.

**Keywords:** Innovation systems, pesticide contamination, urban farming, West Africa

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