



Tropentag, September 11-13, 2024, hybrid conference

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Ensuring food and nutrition security in Africa through the diversification of the food systems

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Abstract

The triple burden of malnutrition, undernutrition (stunting, wasting, underweight), overnutrition (overweight, obesity), and micronutrient deficiencies, remains prevalent in Africa. This problem hinders economic development and growth, while overburdening Africa's fragile health systems. Global nutrition is dominated by 15 highly developed crop species providing about 70% of human calories, although 50,000 plant species are edible. Meanwhile, crop diversity is declining at the allelic, genotypic and species levels. This one-sided food production is vulnerable to diseases and pests and climate change and variability. Against

this background, HealthyDiets4Africa, a six-year (2023–2028) EU-funded project, aims to harness the potential of food system diversification to combat malnutrition, enhance food and nutrition security in Ivory Coast, Benin, Ghana, Liberia, Nigeria, Cameroon, Uganda, and Kenya. The project objectives include 1) establishing dietary diversity-monitoring framework for food systems using new established metrics, 2) developing technologies for sustainable diversification of food production, including new varieties of major crops, innovative production systems for underutilised crops, and diversification of existing cropping systems, 3) enhancing consumer acceptance and adoption of diversified sustainable food products that support human health, and 4) promoting wide acceptance and adoption of diversified food systems. Since the start of the project in 2023, the following results have been achieved: 1) a multi-level mixed-methods approach has been used to develop solutions and evidence-based decision matrix aiming at the reducing risk of malnutrition and food environment information has been compiled, indicating entry points for interventions, 2) seven living labs have been established in six African countries to identify, develop and pre-test innovations for upscaling to promote diversified sustainable food systems, 3) about 24 underutilised plant species with limited nutritional information have been selected for nutritional analysis, which will be incorporated into a comprehensive nutritional composition database developed by the project using existing databases and literature, 4) over 50 nutritious crop species, including vegetables, cereal/grains, roots/tubers, legumes, and non-forest timber products are targeted in the project, and 5) sustainable innovations and practices are being identified and developed for upscaling, 6) youth and women are being trained in sustainable food production systems and best agribusiness management practices to reduce youth unemployment.

Keywords: Diversification, food and nutrition security, food systems, food value chains, innovations, interdisciplinary and translation approach, sub-Saharan Africa, sustainable diets