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Enhancing food and nutrition security through the reintroduction of forgotten crops into modern food systems: a holistic approach

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Abstract Code: 366**SZYMON WOJCIECH LARA^{*,^}, TSIAMI, A.*[,], RYAN, P.[^], CROSS, P.*: ENHANCING FOOD AND NUTRITION SECURITY THROUGH THE REINTRODUCTION OF FORGOTTEN CROPS INTO MODERN FOOD SYSTEMS: A HOLISTIC APPROACH**

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Introduction:

The homogenisation of global food systems has led to significant agrobiodiversity decline worldwide. Nearly 90% of today's global calorie production originates from just 15 crops and many of the minor-crops and traditional varieties have been lost or have diminished from consumer plates. On the contrary, there are at least 7,039 edible plant species, but only around 417 are considered food crops. Many of these *forgotten edibles* have great economic, societal, and sensory potential and some could be exploited through various innovative gastronomic solutions for increasing food and nutrition security. Diversification of food value chains with forgotten crops is limited due to many value-chain bottlenecks.

Rationale:

Better understanding of the bottlenecks can help to improve sustainability and resilience of food supply chains. This research project is based on a multidisciplinary and holistic mapping of barriers and facilitators to the diversification of the food systems with forgotten edibles.

Methods:

This manuscript is part of a PhD research project run in collaboration with the University West London and the Royal Botanic Gardens Kew and is based on a mixed method approach:

- Archival Searches of UK seedbanks and other databases.
- Semi-structured interviews and document analysis of a UK business case study.

Protocol followed according to Yin, 2018.

- Sensory and Texture Analysis of selected forgotten (*Pisum sativum* L.) varieties and comparison with commercial grade cultivars. Standards followed: *BS ISO 8586:2012 & BS ISO 8586:2014*

Results:

Key areas of concern for reintroduction of forgotten crops include limited access to genetic material at seedbanks, lack of formal recognition by public sector, spontaneous sensory/textural characteristics, unique business models, communication between actors and overlooked culinary applicability.

Conclusions

Appropriate recognition and alignment of unique characterises of forgotten crops by food systems actors is essential for feasible diversification of the food systems for food and nutrition security.