

# An integrated approach to the study of orphan crops and indigenous food systems: evidence from Tropical Africa.

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Northern Ethiopian highlands

## Traditional food and agricultural systems (TFAS) in Africa

- Contrary to their reputation of backwardness and scarcity, Traditional Food and Agricultural (TFAS) Systems in Africa have historically been crucial to create and maintain biodiversity-rich landscapes, hosting numerous native plant species.
- Over the past decades, the African continent has witnessed a progressive abandonment of TFAS, together with a significant cultural erosion, following the growing urbanisation, social transformations, and land use change.
- This phenomenon has led to many native plant species and landraces becoming “orphan crops” (OC) and being replaced by a narrow range of commercial hybrids, usually highly input-dependent and unable to support balanced diets.
- Ex situ conservation of crop genetic resources is not enough. There is an urgent need to design effective conservation strategies for agrobiodiversity in situ, taking into account the biocultural nature of such elements.



Ethiopian grains, including broad beans and hulled barley

**R.Q.1.** What is the diversity of crops currently cultivated in the highlands of Ethiopia and Guinea? How are they used?

**R.Q.2.** What temporal changes in crop choices and use can we identify with respect to the past (20-40 y.a)? and what were the main drivers of change?

**R.Q.3.** What is the connection between crop diversity and the integrity of traditional food systems within case-study cultural areas?

## Crops as biocultural elements

- Traditional crops have been selected, preserved, and transmitted by human populations over time and generations. They are often inseparable from the broader local food system they are grown for.
- What farmers seek in seed selection, and how different varieties are used day to day within traditional farming and food systems, is a fundamental matter behind understanding their biological evolution and achieving their conservation.
- Local food habits and preferences play a crucial part in preserving landrace diversity in situ.

## Scope & objective

- To deepen the complex relationships between local agricultural choices, environments, cultural preferences, and temporal changes within two agrobiodiversity hotspots: the highlands of Ethiopia and Guinea.
- Findings will contribute to understanding the extent to which the abandonment of TFAS is affecting agrobiodiversity conservation, and will contribute to the effective design of future conservation strategies.



Northern Ethiopia - tools for food processing