

## 2.2 Millets:

### Closing the Circle on Production and Consumption for a Healthy, Resilient, yet Neglected Crop

*Millets include a range of hard-grained cereals which are nutritionally rich in key micronutrients, with growth also resilient to heat and drought. However, widespread use is limited in part by cultural associations, with millets often considered to be inappropriate as an indicator of status, and difficulties in flour preparation with a short shelf life. Research undertaken through the TIGR<sup>2</sup>ESS and MILLNETi programmes across contrasting agroclimatic zones and rural communities in India and sub Saharan Africa demonstrate how millets could make a major contribution to healthier diets and provide an economic opportunity for supply to rural and urban communities.*

#### Challenges and opportunities for millet cultivation

Researchers identified major challenges both in terms of consumption and production for millets. With the more widespread availability and aspirations for the larger, starchy grains in wheat and rice, millets have been increasingly considered to be appropriate for impoverished communities or animal foodstuffs. In addition, there are challenges in terms of both processing and production.

Millets are laborious to process, and the flour has a shelf life limited to a few weeks. The lack of demand within rural communities, and absence of a supply chain network, limits the economic returns on such crops, even though they remain productive under more extreme climatic conditions.

The aims of the research were to engage with rural communities to promote the benefits of millets in terms of health and cropping diversity, and develop marketing opportunities for millets as smart foods in urban populations.

#### Local engagement was key to promote millet production and consumption.

The researchers found that millets had once been widely grown and consumed across India, but had become an 'orphan' crop, with the cultural traditions displaced over recent decades.

The team included social scientists, economists and public administrators to tackle the challenges in production and processing. In Odisha, they used local languages and local recipes to restore pride and a positive appreciation of the nutritional benefits of millets for mothers and infants. On the production side, they helped farmers improve crop diversity, mechanise processing and develop marketing opportunities

Markets in urban communities could improve the supply chain and add value. Biofortified millets (produced by ICRISAT and HarvestPlus) could enhance novel millet food products. Overall, impact arose from improved nutrition, incomes and livelihoods, and enhanced self esteem for females, leading to resilience in the value chain for production and consumption of millets.



FUNDING CALL	Growing Research Capacity: UKRI GCRF
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