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Mobilising agrobiodiversity in India to support planet-friendly school meal programs: Insights from participatory crop selection

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Abstract

India's mid-day meal scheme reaches over 112 million children daily, yet a persistent disconnect between school menus and local agrobiodiversity limits its nutritional quality, ecological sustainability, and cultural relevance. Addressing this gap is at the heart of a broader effort, led by the Alliance of Bioversity International and CIAT under the CGIAR Multifunctional Landscapes and Policy Innovation Science Programmes, that seeks to reimagine school feeding by integrating local agrobiodiversity into public procurement and building agrobiodiverse food systems aligned with India's commitments under the Convention on Biodiversity (CBD).

To advance this agenda, a participatory crop selection exercise using a quadrant-based prioritisation framework was conducted in Mandla district, Madhya Pradesh, a tribal-dominated region, as a part of the ongoing school meal initiative. In the activity, key community stakeholders such as producers, school cooks, parents and school faculties collectively evaluated 53 locally available species across four dimensions: agroecological performance, nutritional value, farmer and consumer experience, and procurement feasibility. Shortlisted crops then underwent structured deep-dive discussions to map practical leverage points for school meal integration.

From this exercise, 13 priority crops were selected. Pumpkin (*Cucurbita pepo*), colocasia (*Colocasia esculenta*), and cowpea (*Vigna unguiculata*) emerged as the strongest candidates, valued for their low input demands, locally saved seed systems, and broad acceptance among children. However, the exercise also surfaced persistent challenges, including seasonal volatility and labour-intensive processing for certain species such as jackfruit (*Artocarpus heterophyllus*).

Our observations demonstrate that embedding underutilised crops into school feeding programmes can simultaneously advance nutrition and agrobiodiversity. Beyond identifying locally appropriate crops, the participatory quadrant approach generated a community-owned roadmap, surfacing practical entry points, shared priorities, and co-created pathways for integrating agrobiodiversity into school meals. This positions the approach not merely as a crop selection tool, but as a foundation for sustained, community-driven action with

direct relevance for nutrition-sensitive agricultural policy, public procurement reform, and integrated landscape planning.

Keywords: Agrobiodiversity, nutrition, participatory crop selection, school meal