



Nutritious Food Foresight:

Twelve ways to invest in good food
for emerging markets



MILLET-BASED FOODS

INNOVATION SNAPSHOT

Delphi directive	Target nutritious food
Start with native, nutritious foods	Millet, sorghum, amaranth, and other high-quality nutritious grains and seeds

Millet is a group of small-seeded grasses that has been grown over the past 7000 years in both Africa and Asia. These crops are require less water to grow than other grains, making it more efficient and drought-resistant. Packed with nutrients comparable to that of whole wheat, millet can be scaled to replace less nutritious grains, especially those that are harder to grow. However, for this to be achieved, millet would need to disrupt parts of food systems where traditional grains, like maize, rice, and wheat have traditionally dominated. Processing millet into end-products that mimic traditional grain products, such as bread or tortillas, offers an opportunity to do just that.

ICRISAT's Smart Food initiative is accelerating international support for the research and development of [millet-based products](#) and value chains. Hybrid and open pollinated varieties have taken off in India in particular, where population is dense and infrastructure stable. There, more millet-based food products are even showing up in schools and [university](#) hostels. In Malawi, millet has also been cultivated successfully to meet the needs of local populations. The key to increasing the accessibility and affordability of millet-based foods is to increase consumer demand, support millet value chains, and orient supply toward local markets rather than export markets.

NEEDS

Context and Infrastructure

Millet-based foods would require little additional infrastructure development, as it would rely on already existing systems for implementation. For this reason it would be suitable for deployment in a variety of geographic contexts, including rural villages, towns, and peri-urban areas.

End User Considerations

Millet-based foods could be deployed for adoption by end users with a variety of economic and institutional profiles, ranging from smallholder subsistence farmers to individual entrepreneurs and cooperatives. In addition, adoption would require limited additional capacity development for adoption, as the innovation is relatively simple in nature and thus easy to explain.

Collaborations and partnerships

A variety of partnerships at the local-level could support the adoption and eventual scaling of millet-based foods. For instance, marketing campaigns and facilitators such as civil society organizations and NGOs can introduce local communities to adaptations of ancient nutritious foods within local cuisines. These activities could help increase demand, and targeted agricultural policies could incentivize farmers to grow millet on less productive land. A minimum consideration to increase adoption is the need to develop stronger market linkages between producers, processors, distributors, and retailers, to ensure supply and demand of various millet-based products is coordinated effectively.

Considerations for business models

Business models for millet-based foods would need to take into account a variety of considerations. First, demand must be created for millet-based products in the appropriate consumer segments. Millet-based foods resembling traditional wheat, rice, and maize products could replace less nutritious products if they could be produced at the right price. In addition to this, farmers will require quality inputs to produce millet-based foods, including seeds of improved millet varieties, which may benefit from millet seed companies who provide these inputs at affordable prices.

