

Millet to win it

Millets are widely considered a probable solution to battling not just food security issues, but also lifestyle diseases and malnutrition. However, it's still an uphill battle to get the superfood on people's plates. What might be the way forward? Meera Rajagopalan explores.

The first time I started to consistently hear about the health benefits of millets was about seven years ago, when “organic” began making a buzz too.

The narrative was intrinsically connected with the lost heritage and ancient knowledge of India, something we could apparently reconnect with through the stalks of any of the various types of millets we could consume (see box).

Image courtesy of ICRISAT

A millet by any other name

The generic name “millet” does not quite capture the variety in these superfoods. Here are just a few varieties of millets grown around the world.



Sorghum
Pearl Millet
Finger Millet
Foxtail Millet
Barnyard Millet

Kodo Millet
Little Millet
Proso Millet
Browntop Millet

However, my first foray into cooking healthy with millets did not go down well. The millets I had planned to make were not as easy to cook as rice, and I had no one to tell me how to cook it, simply because the millet tradition had disappeared over one generation.

The players of this scene were clear: Rice was the villain, oats was the benign foreigner, and then, millets came on to the stage as the forgotten home-grown hero who would eventually save the day. The scene is still being played out in various parts of India.

Millets, which were part of the natural crops of the region, have systematically been muscled out of agriculture by the more attractive rice and wheat. In India, the area under millet cultivation was down 63% from 1978 to 2013. Little wonder then, that rice and wheat dominate today's plates of Indians.

The truth, as I found out after several half-used packets of millets was this: one cannot migrate to a millet-heavy diet easily. Eventually, it all boils down to convenience.

Now or never

However, we might not have the luxury of convenience for too long. With the ever-increasing burden on our already parched and over-fertilized land and bodies, solutions for sustainable food solutions are being sought, and diets examined worldwide. Millets are emerging as a natural solution, loaded as they are with minerals and importantly, for farmers, are able to withstand drought conditions.

Millets are a group of small-seeded grasses, mostly grown in semi-arid regions of Africa and Asia. In 2016, 28.46 million tonnes of various kinds of millets were produced around the world, according to FAO estimates, with more than 97% of the yield produced in low-income countries. India accounts for 36% of the world's production.

However, the initial question remains: How do you change diets of entire populations?

Joanna Potaka, executive director of Smart Food, an initiative by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), is aiming big. The India-Africa collaborative project aims to bring traditional foods back as a staple food, to diversify crops, and millets form a major part of the initiative.

“Millets tick all the boxes,” says Potaka. “When we say smart foods, we mean foods that are good for you, good for the planet, and good for the farmer.”

Part of their work has been in working with the government at various levels: central and state governments, who, Potaka says, are creating an infrastructure that will help support the scaling up of millet operations.

Anshuman Das, programme manager, sector head for agriculture, and livelihoods, Welthungerhilfe India, an organization working in the space of rural development around the world, says large-scale adoption



Image courtesy of ICRISAT

of millets is only possible with the involvement of government. Other initiatives, he says, can increase awareness and drive demand.

Many initiatives are trying to plug millets into two of the largest purchasers of food grains in India, the Public Distribution System (PDS), and the noon mid-day meals scheme. While the Public Distribution System (PDS) supplies subsidized food grains and distribution of essential commodities, through a network of Fair Price Shops, the mid-day meal scheme provides school students with nutritious free lunches.

Recently, Smart Foods partnered on a pilot study with mid-day meals provider Akshaya Patra in the state of Karnataka in India to study the nutritional benefits of including millets as part of the children's noon meals. If successful, this could mean a huge shift in the middle-of-plate inclusion of millets. Akshaya

Patra has also introduced millets in government schools in another state, in the form of dessert and other margin-of-plate items.

Odisha, which has adopted the Millets Mission with great fervour, has embarked upon a project that incentivizes millet promotion and cultivation with the help of NGOs.

Vilas Tonapi, director of the Indian Institute of Millets Research (IIMR) in Hyderabad, says plans of the government include a ramp-up of all activities related to millets: production, processing, and consumption. The plan, he says, is to target all stakeholders of the millets equation who might have a position of influence, including the wellness industry: dieticians, nutritionists, and gym owners.

Das, whose "Promoting Sustainable Local Food Systems" project aims to address the food value chain from three nodes - the producer,

consumer, and the marketplace - organizes several workshops and awareness campaigns, while also working with millets farmers.

Pieces of the puzzle

Yet, challenges remain, especially with respect to increasing the demand for millets. How, and from where do we start?

The way forward might lie in the unsung heroes of the millets story who are often ignored in the high-decibel discussions around the farmers, consumers, and the government: the small and medium enterprises who work to make millets more palatable to today's populations.

"These companies spend years in research and development, and struggle to find funders because of the nature of the product cycle," says Potaka, maintaining that they form the key to popularization of millets.

“Millets tick all the boxes. When we say smart foods, we mean foods that are good for you, good for the planet, and good for the farmer. If you just bring out a millet cookie, that’s not going to have the impact we need.”



Joanne Potaka, executive director of Smart Food, ICRISAT

“People are actively trying to fight lifestyle diseases, and this (millet adoption in diet) will happen first in the cities and then trickle down to towns,” says Sai Krishna Popuri, founder and CEO of Health Sutra, a company that produces ready-to-eat and ready-to-cook millet products. The focus is not on changing the diet, says Popuri, but just the ingredients. The company sells 600 tonnes of products a year, and is born of the idea that to sell health, “we need to fit into the traditional food narrative.”

That means that millets can transform into an adjective where none existed before, to make available millet idlis, millet poha, and other foods that were hitherto made with other grains, especially rice.

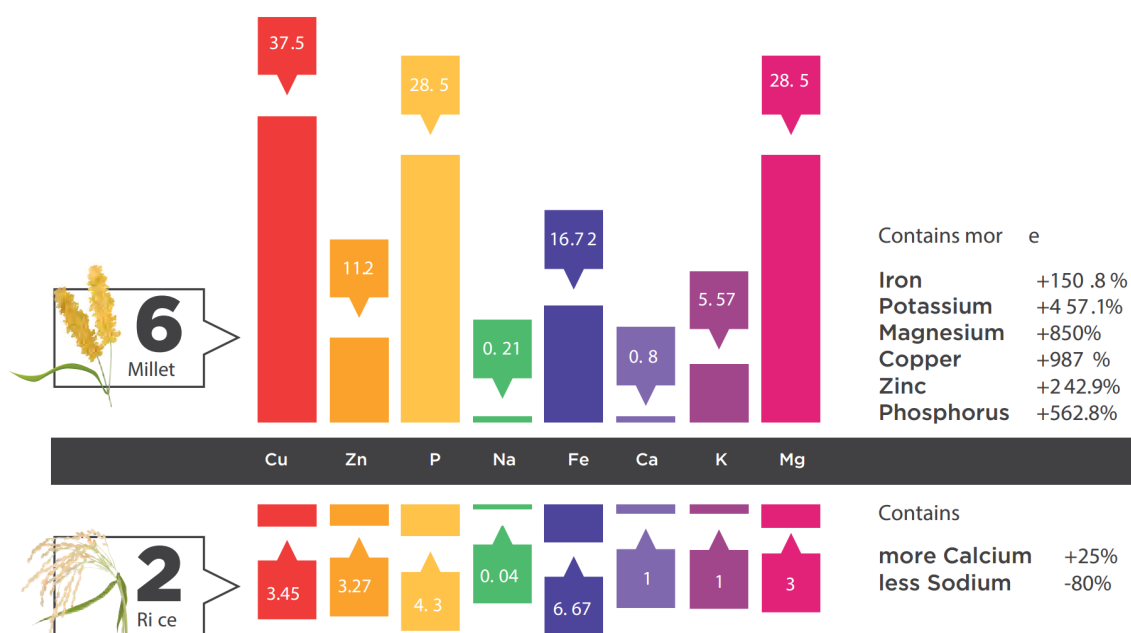
This, the idea that millets are best introduced slowly to the diet is one that almost everyone agrees on. “A full shift from rice to, say, foxtail millet is too radical,” says Popuri, whose products include ready-to-eat millet flakes, and millet rava for idlis.

“People should be able to cook millets the same way they do wheat and rice—be it pongal, or rava upma (both traditional dishes using rice/wheat-based grains),” says Tonapi. IIMR conducts monthly programs for those interested, as well as workshops on preparing value-added millet items.

Small Millets Foundation (an initiative of the DHAN Foundation) helps consumption of millets, particularly small millets, through videos, live demonstrations, and cookbooks that are distributed to members of farmer’s federations and women’s groups. In fact, in association with the Tamil Nadu Agricultural University, the Small Millets Foundation has standardized the recipes for centre-of-plate, margin-of-plate, and bakery items for use by the general public and other small scale enterprises, typically led by women.

Nearly all people we spoke to included popularization of millet cooking in their program. For instance, Smart Food conducted a culinary competition at Ramayya University in

Nutrition: Rice vs. Millet (Sorghum)





Products from HealthSutra

“Processing of millets is drudgery, and farmers often prefer to sell the grains, rather than dehull it themselves, and they consume rice available in the PDS.”



M. Karthikeyan, CEO, Small Millets Foundation

Bangalore, India, where participants cooked an entire meal with millets. Two years ago, a reality cooking show on Kenyan TV sought to popularize traditional foods.

The IIMR often conducts awareness programs and workshops to encourage the use of millets at a household level, and Welthungerhilfe also conducts workshops to demonstrate how millets can be prepared.

Potaka, however, makes a distinction between changes in diet and supplementary foods, stressing that the Smart Food program is meant to bring back sorghum and millets as staple foods. “If you just bring out a millet cookie, that’s not going to have the impact we need,” she says.

While awareness on the consumer end is rising day-by-day, Popuri cautions against positioning millets as a panacea. “A lot of people are vaguely aware that millets are good, but don’t know how to use them or how exactly they are good for their health,” says Popuri.

The farmer in the dell

When demand rises, the millet farmer

¹ Bandyopadhyay, Tirthankar & Muthamilarasan, Mehanathan & Prasad, Manoj. (2017). Millets for Next Generation Climate-Smart Agriculture. *Frontiers in Plant Science*. 8. 1266. 10.3389/fpls.2017.01266.

must be ready to supply the grain, and also benefit from it, something that does not seem likely in the current scenario, say experts.

Millets remain a fringe crop, or an intervening crop; either way, not strong enough to warrant a concerted public policy.

“There has been a systematic dismantling of traditional foods due to various reasons. Who decided, for example, that rice and wheat are India’s foods?” asks Das. He adds that over time, the systems in place for rice production and consumption have embedded themselves so deeply that it is very difficult to think of alternatives, least of all because of the indisputable convenience of rice.

The strong rice-wheat lobby, whose near-domination of the PDS, agricultural land, and markets, make millet growers particularly vulnerable to exploitation. The combined rice and wheat production in India is expected to be around 281.4 million tonnes this year, ten times that of millets.

With a looming food crisis on the horizon, though, it is time to look beyond rice and wheat, even if one is ensconced in its familiarity.

Millets hold great promise for food security and nutrition amid ever-increasing agricultural costs, climate change, and burgeoning mouths to feed worldwide, says a 2017 study¹.

While “millets” is a blanket term we use for the category of cereals, there are some that are more equal than others, says M. Karthikeyan, CEO of Small Millets Foundation. “We often see that sorghum and pearl millet get the maximum assistance, and the small millets, each of which have different nutritional values, often get short shrift,” he says.



Image courtesy of IDRC _ DHAN Foundation

What you sow, you don't eat

Millets still suffer from low consumption in rural areas, where they might arguably battle malnutrition better than rice can.

Tonapi agrees that there must be a concerted effort to get millets on to the plate of the rural and urban poor. Apart from the health and wellness industry, Tonapi says the plan is for the government to also tap into the ecosystem of rural health workers, because “the bottom of the pyramid is more important, and we see millets as a natural combatant of malnutrition, both urban and rural.”

Small Millets Foundation works on decentralization of millets processing, and Karthikeyan says village-level processing is the only way to ensure that all millets are grown and consumed in rural areas.

“Processing of millets is drudgery, and farmers often prefer to sell the grains, rather than dehull it themselves, and they consume rice available in the PDS,” he says.

If processing happens at the village

level, says Karthikeyan, value-added products will also happen locally, and that can significantly impact the livelihoods and consumption of different types of millets.

The rural consumption angle is a tricky one, admits Potaka, adding that programs are being considered and will soon be launched for rural areas as well.

Popuri says the demand will be led by the urban areas, trickling down to the other regions. “We are really managing perceptions,” says Popuri. “In a town with a population of about 2 lakh (200,000), there is still the idea that millets are a poor man's food.”

In a strange paradox, millets have become aspirational for the health-conscious urban elite, just as rice was an aspirational grain for large sections of the marginalized, less than a decade ago.

What's next?

The signs for a boom are all there, with increasing awareness and infrastructure noises around millets.

As a first step, Karthikeyan suggests consolidation, helping

farmers retain the crop. He cites the example of the village of Anjetti, where all six varieties of small millets would be cultivated less than a generation ago where, now, only one ragi is cultivated substantially.

He says that several processing companies, farmers, and allied stakeholders have left the millets space because of a lack of formal support. He advocates the setting up of a specialized organization dedicated to millets, with state-level organizations to help all stakeholders promote the grains seamlessly.

The National Policy on Millets, released recently, addresses gaps in various areas of the production and supply chain—from seed, to farmer producer clusters, to processing, to linkage with markets.

Part of the plan involves setting up 25 seed clusters and 250 processing centres across the country, creating farmer federations, and providing market linkages.

However, there is nearly no new land available for farming millets; instead, the national mission will focus on improving productivity, and promote millets as an in-between crop in “highly endowed” regions, where rice and wheat farming takes place.

Tonapi says the country is looking at an output of 30 million tonnes by 2023, two tonnes more than the current global production. The year 2023 is being planned as the United Nations International Year of the Millets, a distinction that might remind one of a declaration ten years earlier, in 2013, to the quinoa. If India and Africa are able to replicate the success story of the quinoa, it might well have substantially contributed to the food security solution. **i**