THE INDIA FORUM
A JOURNAL-MAGAZINE ON CONTEMPORARY ISSUES

April 24, 2023

The Reincarnation of Millets: From Derided to Divine

By: Sudha Nagavarapu

The millets revival in India caters to the biases of urban and well-off consumers. The promised benefits to marginalised communities have been unrealised.

In 2023, the International Year of Millets, the buzz around millets has intensified. The Indian government rechristened them as *Sri Anna*, denoting a food grain with divine grace, and launched several initiatives to promote cultivation and consumption.

This hype built upon an already booming millet ecosystem. Tens of thousands of viewers were hooked onto videos by Khadar Valli Dudekula that extolled the benefits of these â??superfoodsâ??. (Dudekula was awarded a Padma Shree in 2023 for his advocacy of millets.) Nearly every week, a new millet product was introduced â?? mainly in urban markets.

The new consumers of millets are primarily urban and well-off, with no historical or cultural connection with millets. Amongst the communities who once ate them regularly, the consumption of millets continues to drop. Success stories of communities re-adopting and benefiting from their traditional foods often make the headlines, but these are few and far between. The millet revival in India remains disconnected from the past and is increasingly shaped by the preferences and biases of its proponents and drivers. Even more worrying is that the unmoored resurgence of these grains poses ecological, sociocultural, and nutritional problems.

Ecosystems of the past

The label â??milletsâ?? covers a wide range of small-seeded grasses belonging to different botanical subfamilies. The connections between these dryland cereal grains â?? referred to colloquially as â??coarseâ?? or â??lesserâ?? grains (*kirudhanyalu*, *mota anaaj*) â?? are ecological and cultural.

Millets are diverse. They include grains that were grown on relatively fertile lands in dryland regions and consumed by rich and poor families alike, such as finger millet (*ragi*, *mandua*), pearl millet (*bajra*, *kombu*) and sorghum (*jowar*, *jola*). In fact, *saanwa* (barnyard millet) was grown on fertile rainfed lands in central Uttar Pradesh, a region with moderate rainfall, and sometimes intercropped with *dhaani* (indigenous paddy). *Saanwa kheer* was even consumed by the rural elite, and *saanwa* pannicles were worshipped during harvest festivals in September and October. Other millets were cultivated on less fertile lands. Their very hardiness was derided; they were the grains that â??would grow even if just tossed onto the landâ??. Among the most resilient was browntop millet, which grew in the wild and as a weed in cultivated fields. It was known as *fikaar*, a famine food, in drought-prone Bundelkhand, and was used to make the derogatively termed *ghaas ki roti* (roti made from grass).

> Dalit women used to work in the lands of large land-holding farmers from oppressor castes, and received *ragi mudde* (balls of cooked finger-millet flour) after a hard day of work.

Millets were also the resilient grains of Dalit-Bahujan-Adivasi (DBA) communities, of women and men who sowed, weeded and harvested in the landlordsâ?? fields or in their own marginal landholdings. Oppression, struggles and resilience are intertwined through the stories of millets that I have been privileged to hear while helping grassroots organisations set up millet initiatives, researching farming and food transitions, and visiting millet cultivating communities

In their village near Kaiwara Hill in southern Karnataka, Kadiramma, Nanjamma and other women, mostly in their 60s, described their relationships with different millets. These Dalit women used to work in the lands of large land-holding farmers from oppressor castes, and received *ragi mudde* (balls of cooked finger-millet flour) after a hard day of work. Sometimes, during the day, their hunger drove them to gather and eat raw unhusked *saame* (little millet) from nearby fields. They even gleaned ragi - after harvesting the crop, they would go into the big farmersâ?? fields and painstakingly pick out fallen grains. They would winnow these collected grains to separate them from the red soil, a laborious task. After all this work, they had to give half of the cleaned grains to the landowner.

The pain and anger was still visible decades later, when I spoke with them in March 2023. â??My arms ached holding the *mora* (winnowing pan). But what could we do?â?• asked Kadiramma.

â??*Alaage undedhi*â?• - that was how it was.

While menfolk fondly remember the taste of millets, women remember the hard work. In conversations between 2012 and 2019, â?? *Kootiba kaun*?â?• â?? who will process them â?? was the constant refrain amongst women in central Uttar Pradesh during discussions on reviving millets. Until fairly recently, husked millets â?? kodo, barnyard, foxtail, little, proso and browntop - had to be processed by hand. Unlike rice, for which mechanised rice mills were set up in India by the late 19th century, mechanised millet processing only picked up pace in the last few decades. The difficulty and tedium of processing was a significant factor in the decline of millet consumption. â??*Savere ko kooti, sandhya ko pisai*,â?• - we pounded the grains in the morning and ground them into flour in the evening, the women told us.

Most DBA communities were denied access to fertile cultivable land and lacked the resources and agency to improve their marginal landholdings. A few powerful Bahujan communities benefited from land reforms, and some Adivasi communities had autonomy over what and how they could grow. The rest were at the beck and call of the landlords. Their lives were marked with precarity and hunger, and they had to depend on hunting and foraging to meet their food needs.

> Millets were intercropped with pulses, oilseeds, vegetables and even fibre plants [...] They were traditionally consumed alongside seasonal and locally sourced foods.

â??We never could sow or weed at the right time,â?• recounted Jamuna Prasad, when we spoke in 2018 in his village on the banks of the Gomti river in central Uttar Pradesh. â??When the zamindar called, we had to go. Sometimes, we couldnâ??t even harvest properly, and our crop would be ravaged by nilgai (antelopes) and wild boar. If we were lucky, we were able to harvest some millets and pulses.â?• Other villagers described how they foraged for wild foods well into the 1980s, including *jharua ka daana* (browntop millet), which they pounded to dehusk the grains. They cooked these dehusked grains to make rice.

Millets were intercropped with pulses, oilseeds, vegetables and even fibre plants such as hemp (*sanai*) and roselle (*patua*, *gongura*). They were traditionally consumed alongside seasonal and locally sourced foods. Women would collect edible weeds, hemp flowers, *chane ka saag* (the greens of the Bengal gram plant) and other â??freeâ?? foods from the cultivated fields. DBA women would also gather fallen fruits from orchards, and forage for wild fruits, greens, mushrooms and tubers from forests. Men (and some women) from these communities would fish and hunt hares, porcupines, birds, crabs and even large animals like deer and wild boar. The animals they reared provided them milk and meat.

Many among these communities could not afford spices, oil or ghee, so they cooked with lard, other animal fats or crushed oilseeds, and used salt and chillies for seasoning. In the absence of refrigeration to extend shelf life, fermentation was widely used to preserve millet-based foods. *Ambli*, *kanji*, and *lapsi* are just some of the names used to describe millet porridge or leftover rice or *mudde* (a combination) mixed with water or buttermilk and left overnight, to be consumed the next morning in a fermented form. Older farmer-labourers reminisce about how they could work all day after consuming such foods.

Leaving the past behind

Indiaâ??s agricultural sector grew at a steady rate in the decades after its independence in 1947. However, international scientists, as well as their Indian counterparts (who mainly hailed from privileged castes), had little understanding of the diverse diets of DBA communities, and focused narrowly on rice and wheat. They also failed to understand that it was not lack of knowledge, but inequity and oppression that led to hunger. Thus they built a narrative of Indian agriculture as consisting of ignorant, backward farmers resulting in poor productivity and a starving populace. War, drought, hoarding and punitive policies by the United States in the mid-1960s led to wheat shortages in the cities, which strengthened this narrative.

This was the background to the launch of the Green Revolution, which â??modernisedâ?? Indian agriculture and introduced high-yielding varieties of wheat and rice, along with synthetic fertilisers and pesticides. These were buttressed with processing infrastructure and market support for these grains. Green Revolution crops required a capital outlay, thus only farmers with resources could grow them, but the returns were huge. The higher production of wheat and rice led to increased availability. As the Public Distribution System (PDS) expanded, more and more Indians gained access to these grains.

> A health activist in southern Orissa described how many Adivasis in the region would crave the white rice consumed by the potbellied merchants they traded with, instead of their own millet pech (porridge).

Wheat and rice (especially white rice) had been the grains of the rich and powerful, and less privileged communities rarely had the opportunity to consume them. A health activist in southern Orissa described how many Adivasis in the region would crave the white rice consumed by the potbellied merchants they traded with, instead of their own millet *pech* (porridge). They could effortlessly climb the hills multiple times a day, but the plumpness of the trader was a marker of his prosperity and sedentary habits, which they aspired to, as much as they desired the sweet taste of rice. Such aspirations made the transitions ushered in by the Green Revolution welcome. As paddy rice and wheat became easily available and affordable, they rapidly replaced millets in diets.

Meanwhile, DBA communities were experiencing cultural transformations. Proponents of modernity considered their traditional practices to be backward, while religious groups promoted â??pureâ?? Hindu practices. For example, followers of the spiritual leader Jai Gurudev in Uttar Pradesh abandoned practices such as hog sacrifices, and converted to vegetarianism. Further, education and employment opportunities opened up for DBA youth, and exposure to urban and privileged lifestyles increased. Some of them learnt to scorn their old foods as uncultured. Others gave them up to avoid being mocked or targeted. Millets were left behind in the â??mainstreamingâ?? of these communities.

A rediscovery driven by ecological and health concerns

The Green Revolution was hailed as a success story and was a model for interventions into other crops, dairy, and livestock. But modern agriculture is capital-intensive and requires huge amounts of resources, especially water. In parts of Rayalaseema and interior Karnataka in the drought-prone Deccan plateau, by the turn of the century, groundwater was being pumped up from as deep as 2,000 ft below the surface. Even rainfed crops struggled to grow in the parched soil. The overuse of chemicals polluted water bodies and led to pesticide resistance. As a result, farmers became increasingly vulnerable to weather shocks, pest attacks and price fluctuations. Farmer suicides, hitherto unheard of, began to rise.

The new practices transformed farming over the 1970s, 80s, and 90s, and led to a sharp drop in the cultivation and consumption of millets and pulses. The diverse agri-food ecosystems that millets inhabited began disappearing.

Activists and organisations critiqued these destructive forms of agriculture, and advocated a return to ecological farming. Some observed that millets continued to be cultivated by some DBA communities as part of mixed cropping systems in dryland regions, forests etc. These communities farmed on marginal plots or practiced swidden farming, and most couldnâ??t afford irrigation or chemical inputs. Millets formed the bulwark of the crops they grew, and provided critical food security. Groups such as the Millet Network of India recorded the resilience of these â??forgottenâ?? grains.

> Millet traditions that get propagated are cherry-picked and heavily influenced by the preferences of new consumers. That millets were often consumed with meat and fish does not get much coverage.

The health benefits of millets also began receiving attention. Millets are an excellent source of micronutrients, fibre and essential fatty acids, especially when grown in rainfed conditions and consumed as whole grains. Their low carbohydrate to fibre ratio makes them beneficial for diabetics and for those suffering from bowel disorders. Consumption of millets in fermented form has been found to provide additional benefits. Health practitioners who became aware of this started recommending millets to their patients. Thus, families with little history of consuming millets began looking for recipes to cook ragi, bajra, or korralu. An ecosystem sprung up to support them: websites, YouTube channels, manufacturers, and retailers.

Promotional literature and videos extolled millets as the traditional grains of India, but the millet traditions that get propagated are cherry-picked and heavily influenced by the preferences of new consumers. That millets were often consumed with meat and fish does not get much coverage, while the use of *bhagar* (barnyard millet) as a fasting food in some parts of Maharashtra is now considered a tradition across North India.

When consumed as whole grains, millets are good sources of vitamins, minerals, fibre and essential fatty acids. However, most millet products in the market are stripped of their nutritious bran. The technologies used to process wheat and rice, where bran is diverted as animal feed or for oil, with polished white rice and â??refinedâ?? flours earmarked for human consumption, have been adapted for

millets. Even ragi, which requires minimal processing, is now being pearled before it is milled into flour. This â??refinedâ?? flour is easier to store and cook. While still holding an advantage over wheat and rice, polished millets do not provide all the promised benefits of these grains.

Millets also have been misleadingly promoted as protein-rich foods. This can be harmful in India, where many suffer from the triple burden of malnutrition â?? stunting and wasting, micronutrient deficiencies (like anaemia) and obesity. Like other cereal grains, millets contain some protein, but in non-optimal and incomplete forms and insufficient for our daily requirements.

Not everyone, though, is appreciative of millets. The appearance of millet dishes in every official banquet has led to complaints of boredom with these foods. Others observe that millets are hard to digest. Some millet promoters refer to millets as satvik foods (an Ayurveda term for light foods that promote energy and calmness), but this has been countered by some Ayurveda practitioners.

Implications of the millet revival

The ecological promise of millets comes from their lower resource use and resilience, and also from diversity. For example, in *dongar kheti* (a form of hillside swidden farming), the Kondh Adivasis of southern Orissa plant multiple varieties of *mandua* (finger millet), each with different growing periods and characteristics. Similarly, multiple varieties of millets are planted alongside pulses and oilseeds. This system provides harvests of different crops from August through January, and protects against adverse climate events.

However, the increasing demand for millets is incentivising farmers to grow them as irrigated monocrops (albeit with lower irrigation requirements), thereby reducing their resilience. Meanwhile, adverse climate events are increasing in frequency. In both 2021 and 2022, the monsoon crop was devastated in huge swathes of south India due to heavy rainfall between September and December. Even standing crops and harvested grains, including millets, began sprouting due to high humidity.

> The increased resource requirements for hybrid millets mean that the poorest of the poor cannot cultivate them.

Agricultural scientists are aware of these concerns, but continue to focus on developing hybrid millet seeds for increased yields, shorter growing seasons, and greater nutrient content. Many of these are not suited for water-scarce conditions. The increased resource requirements for hybrid millets mean that the poorest of the poor cannot cultivate them. In some dryland regions such as Rayalaseema, even traditional millets now require irrigation in dry years. The result is that farmers with resources grow these crops for the market, and the ecological promise of millets is unrealised.

While small and marginal farmers benefit from the high prices of millet grains if they are close to a millet mandi or are part of a larger collective, large farmers or aggregators are the ones deriving the maximum profits. The organisations that I work with have encountered such farmer-aggregators across the country â?? they stock tonnes of various types of millets, and sell them to corporate buyers. Smaller farmers cannot tap into these networks or take such risks, and instead use millets as fodder or for household consumption (in small quantities). They often sell these grains at a fraction of the market value. By the time these grains are aggregated, processed and enter the market, they are priced out of the reach of poor communities. Thus the projected economic benefits of millets to small and marginal farmers have only been partially realised.

Todayâ??s reincarnated millets are no longer associated with oppressed communities. But caste-based discrimination persists in India, especially around food. â??At any event we organise, if we prepare and serve food, we know that some people will refuse to eat it,â?• DBA activists observe. As they know how hard it is for their cooked food to find acceptance across caste taboos, many Dalit groups stay away from food enterprises. Only those with courage and some financial support take the risk. These barriers persist in the new millet ecosystem, with these communities rarely able to benefit from the profits to be made, a cruel irony given that millets could not have been revived without them. Thus the emancipatory potential of millets is largely unrealised.

The millet resurgence invites comparisons to the â??boom and bustâ?? cycles experienced by other superfoods such as quinoa. Like millets, quinoa was denigrated as an inferior food before its nutritional benefits were discovered by elite consumers in the US and Europe. Quinoa prices shot up, making it too expensive for its traditional consumers. Meanwhile, large-scale quinoa farms brought down procurement prices within a few years, wiping out the gains experienced by small farmers in the Andes.

A just and resilient millet future

Many of the promised benefits of millets have been sidelined and unrealised in the millet ecosystem. Is it possible to chart a better millet future?

> A return to millet-based agro-ecological farming must address historical injustices through forms of restorative justice.

The first step in charting a just and resilient millet future is to acknowledge that the agri-food systems of the past were built on the backs of marginalised communities, in a deeply inequitable and exploitative society. A return to millet-based agro-ecological farming must address historical injustices through forms of restorative justice. Rather than treating support to marginalised communities as handouts, we must recognise that these are reparations that should be provided on a long-term basis.

In the past few years, many programmes and schemes have been launched by state governments (especially in south and central India), as well as by the union government, to promote millets. These include MSP for millets, introduction of millets in the PDS, ICDS and mid-day meals, and support (financial and technical) for Farmer Producer Organisations (FPOs) and Self Help Groups working with millets. The Orissa Millet Mission (OMM), which combines these various interventions, along with research, under a single mission, has achieved noteworthy results (albeit mainly around finger millet). These initiatives have drawn from the pioneering work of organisations such as Deccan Development Society (DDS), Green Foundation, and a few agricultural universities. Today, many more organisations and activists have partnered with DBA communities to mainstream millets, while improving livelihoods and nutrition in producer communities.

For these efforts to achieve success, consistent support, robust feedback, response systems at the grassroots level and a social justice compass are essential. Instead, barring a few exceptions, most interventions, whether by the government or civil society, focus on expediency and short-term goals. For example, millet processing units have been set up in many rural and remote areas, but several are defunct as machines malfunction or break down (and maintenance and repair is not accounted for), or reliable power supply is not available.

Women are rarely recognised as farmers, an injustice that has wide-ranging implications.[1] Instead, they get organised into Self Help Groups, where they are trained to run millet enterprises, but rarely have a say in decision-making. Conversely, women's labour is externalised and they often do not make a living wage, mainly benefiting from the access to credit that these groups provide. The problems that plague interventions for the poor â?? under-funding, poor planning and weak implementation â?? can be observed in millet interventions. These can be overcome by interventions that set realistic goals, provide the right support at the right time, and that practice compassion and patience.

We can use the heightened attention towards the resurgence of millets to strengthen campaigns for just agri-food systems grounded in local agro-ecological conditions. The diversity, heterogeneity and rootedness of millets make them ideal for anchoring resilient food futures. But this is only possible when we acknowledge the invisibilised narratives around millets, and work together to build an inclusive, equitable and just millet ecosystem.

Sudha Nagavarapu works with grassroots organisations to design and implement interventions in food systems, sustainable agriculture, health and livelihoods. She has coordinated community-driven, collaborative research on maternal health, health systems, food cultures, and agrarian histories.

Footnotes:

1 The Mahila Kisan Adhikaar Manch website at https://makaam.in/features numerous studies and reports on womenâ??s critical role in agriculture and their marginalisation.