

# Are millets really the only grains you need?

While millets are great for you, blindly replacing the rice and wheat in your pantry with vast quantities of millets is inadvisable

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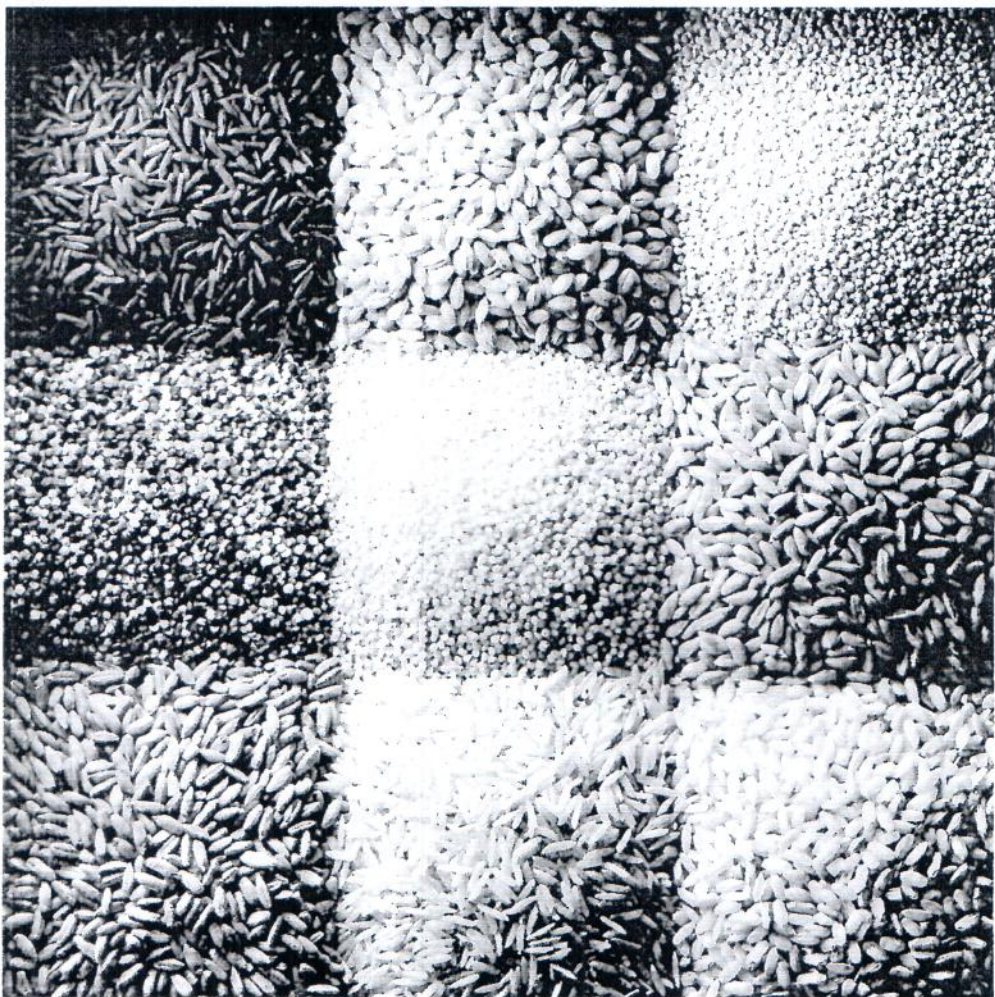
**A** tiny green millet sapling thrusts its way out of arid soil, then young grain sways in a gentle breeze as the voice-over on the minute-long video proclaims: "I may be small but I am strong." The video, released by the UN's Food and Agricultural Organization to mark 2023 as the International Year of the Millet, goes on to list the benefits of millets. "I want to share the benefits widely with all people and the planet," continues the voice. "But I cannot do it alone. So, bring me back to your table."

This promotional video, one among many recent fervid entreaties to consume more of these ancient grains, repeats the oft-touted narrative around millets: their ability to thrive in harsh conditions with little water, the nutrition benefits they offer, their great taste and versatility, their link to ancient food cultures and traditions. In all the boosting, what's often overlooked is the fact that millets need to be seen as a way to expand food diversity, rather than a super grain that has to immediately displace the more prevalent rice and wheat.

Millets are in the spotlight in India too. In January, Chandigarh launched the Millet Mission to promote consumption in schools, while Guyana offered 200 acres to India for millet production. On 20 December last year, Prime Minister Narendra Modi shared on Twitter that he had enjoyed a sumptuous lunch of only millet dishes, including millet *khichdi*, *ragi dosa*, *ragi roti*, *jowar roti* and *bajra*-based desserts, at Parliament House.

Admittedly, some of the brouhaha is justified. As Mumbai-based nutritionist Khushboo Jain Tibrewala points out, this highly varied group of small seed grasses is more nutritious than all-purpose wheat flour and white rice, with a lower glycemic index, higher fibre content and many micronutrients and antioxidants. It is a healthful grain choice in an age of lifestyle diseases such as obesity, polycystic ovary syndrome (PCOS) and diabetes. "Overall, they are an excellent choice for those looking to include more nutritious foods in their diet," says Bengaluru-based sports nutritionist Ryan Fernando, founder of QUA Nutrition. "Switching to millets may also help reduce the carbon footprint as their production is more sustainable and has a lower environmental impact."

Having said that, blindly substituting rice and wheat with vast quantities of millet is not advisable. "There are many valid reasons why millets should be promoted," says Dr. Jyotirajendra Nath Guru, founder of The



(clockwise, from above) A variety of grains; millet porridge; and 'ragi', or finger millet.

PHOTOGRAPHS FROM ISTOCKPHOTO

Millet Foundation, a Bengaluru-based resource and support organisation. However, simply replacing other grains with millets without taking a critical perspective of nutrition will lead to more challenges than solutions, adds Guru, an advocate of sustainable food systems. "Food is an extremely subjective and individual matter; you have to realise that everything doesn't work for everyone."

## ANCIENT GRAINS

Like wheat and rice, millets belong to the ecologically dominant *Poaceae*, or the grass family, one of the largest families of flowering plants, occupying nearly a quarter of the world's vegetation. Millets, mostly consumed in Asia and Africa and widely associated with birdseed in America, are extremely diverse. There are over 20 species; nine are grown in India, including finger millet (*ragi*), pearl millet (*bajra*) and foxtail millet (*thimai*). "Everyone says millets, millets, millets but there are different kinds of millets with very different nutritional properties. It is important to bring in diversity to our farms and plates so that we can benefit from the nutrition that all these grains

offer" says Guru.

Mumbai-based archaeologist and culinary anthropologist Kurush F. Dalal says millets have been part of our diets since the Neolithic period, grown along with rice and wheat. Rice came to southern India only 2,500 years ago; till then, millets were the only grain consumed, he adds. Literature of the Sangam period, roughly between the third century BCE and third century CE, implies as much, says Chennai-based food designer Akash Muralidharan, describing a poem about two lovers that specifically mentions foxtail millets. "The girl has a *thimai* sweet for her lover and they sit down and enjoy it."

Until the 1950s, millets were an important part of the Indian diet, making up around 40% of the grains cultivated in the country. Today, while India continues to be the biggest producer and consumer of millets, they occupy less than 20% of the grain grown here, something policymakers are trying to change. The decline can be attributed to several factors. For starters, caste and class have shaped how these were consumed, with rice and wheat being seen as aspirational grains and millets relegated to being the food of the

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poor, says Dalal.

The Green Revolution of the 1960s, which leveraged technology to increase food production and make the country self-sufficient, focused on high-yielding varieties of rice and wheat, impacting grain diversity. The minimum support price (MSP) intervention for rice and wheat by the Union government to protect farmers also contributed to the decline. "This automatically meant that farmers grew rice and wheat and not any other grain," says Dalal.

Over the last decade, attempts by state governments—Karnataka and Odisha, notably—have been helping bring millets back to the table. From a global standpoint, highlighting the benefits of ancient grains like quinoa, faro and teff has been the zeitgeist of the nutrition world. And millets, often positioned as the Indian alternative to quinoa, have been a vital part of these conversations. Bengaluru-based Raja Varun, founder of Forgotten Foods, which also offers a range of millet-based products, agrees. "There has been a huge surge in millet demand, with more people willing to try out millets," he says.

#### A QUESTION OF BALANCE

Supermarket shelves may be stacked with millets, from raw to sugary cereals, but you don't need to immediately switch to *ragi dosas* and *bajra rotis* at all meals unless you actually enjoy the taste. If you are an urban Indian looking to drop a few pounds, swapping a bowl of rice for one of millets isn't as important as ensuring you stay in a calorie deficit. While millets do have more soluble fibre, protein and antioxidants than rice, there is very little difference between them from a caloric perspective. A cup (174g) of cooked millets provides 207 calories, while cooked rice provides around 206, points out Rahul Gopal, a Chennai-based sports nutritionist and lifestyle coach. "If your primary goal is weight loss, then it doesn't matter which one you pick," he says. "If you don't enjoy the taste of millets, don't eat them."

Contrary to the reigning narrative, millets are not a high source of protein, containing 6-12g per 100g, only marginally higher than rice. Multiple studies have indicated that a staggering 70-80% of

Indians are protein-deficient, unable to hit the recommended 0.8g of protein per kilogram of body weight for a sedentary adult. Millets, like legumes, may contribute to hitting your protein macros but they are no substitute for pure protein sources like eggs, meat, fish, dairy or soy.

From a food security and hidden hunger standpoint, cultivating, promoting and rebranding millet is a welcome move. "Millets require almost no inputs, grow even in extremely low fertility soils, don't need deep ploughing, can be sown with minimal tools or machines, need only one weeding (if at all)," points out an article published by The Millet Foundation, adding that millets are also fairly resistant to pests. "They are also way hardier in storage," says Guru.

But he also firmly believes that it is important to examine how rice and wheat are grown and processed before "jumping on to the millet bandwagon to solve the lack of nutrition in our foods". Rice and wheat, in their ancient grain forms, were diverse, hardy and nutritious too, he explains, adding that mass production and processing have reduced their nutritive value. Polishing grains, stripping off the bran layer, which is rich in minerals, fibres and essential fatty acids, makes them whiter and brighter, but also reduces it, primarily, to a concentrated source of carbohydrates. Historically, millets have been spared this since they are usually processed using traditional techniques. This is changing. "Most millet rices in the market today are stripped of their bran, just like paddy rice is," Guru says. "Unless we process millets in a nutrition-conscious way, we will end up falling into the same trap we did with rice and wheat."

As always, it comes down to promoting diet diversity. Raja Varun is slowly replacing one rice-based meal with a millet-based one. "We have to focus on more diverse diets," says Varun, adding that balance and moderation are key to health. Fernando agrees. "I would recommend millets to my clients as a nutritious and delicious addition to their diets," he says. "However, I would suggest they make sure they are eating a balanced diet, as millets are not a complete source of protein or other essential nutrients."