

Jha says the vetiver grass bush (khus) prevents soil erosion, can pull off 15 kg of carbon sequestration per square metre, and recharges groundwater. The roots contain an oil that's used in perfumes



On Patanjali Jha's 50-acre food forestry farm, on the banks of the Narmada in Khalghat, Madhya Pradesh, diverse planting of edible plants mimic the practice of nature, making optimal use of all space, vertical and horizontal. **PIC COURTESY/ MEGHATITHI KABEER**



Hart and soul

The forest garden story was popularised by Robert Hart, an English pioneer of forest gardening in temperate zones. He saw the potential for adapting growing techniques practised in tropical areas to the cool, temperate climate of his home in Shropshire. In his book, *Cultivating an Edible Landscape*, Hart identifies the gardens of Kerala as food forests with natural rich biodiversity and easy for intense planting. He lists 43 plants in Kerala that grow simultaneously. "From the agroforestry point of view, perhaps the world's most advanced country is the Indian state of Kerala, which boasts no fewer than three-and-a-half million forest gardens... Because of these family forest gardens, most people in Kerala are to some extent self-sufficient in the basic necessities, above all food. They can enjoy the two basic essentials of a nourishing diet: fruit and green leaves. Most Indians never see their national fruit, the mango, vast quantities of which are exported, fresh or in the form of chutney. But the Keralase grow their own mangoes in their own forest gardens, together with some sixty other nourishing food and fodder plants, medicinal herbs, and spices," he writes.



Patanjali Jha, Principal Chief Commissioner of Income Tax, who is currently posted in Mumbai, says he'll be able to devote more time to the farm after he retires in 2023. **PIC/BIPIN KOKATE**

He designs forests

A senior Indian Revenue Service officer may well have earned the tag of medicine man by offering healing herbs grown on his sprawling, low-maintenance permaculture farm in Madhya Pradesh to fellow citizens during the pandemic



The leaves of the Moringa or drumstick plant are a great source of Vitamins A, C, B1, B2, B6 and folate

ANJU MASKERI

IT's not uncommon for Patanjali Jha, Principal Chief Commissioner of Income Tax, to offer gondhoraj lebu, eastern India's best-kept aromatic secret, to visitors who come to see him. While a few drops of the oblong, flaring green lime can accentuate the original flavour of just about any dish, its medicinal properties match its stellar fragrance. "A solid source of Vitamin C and limonene [present in the

skin], it's safe to chew on if organic. The greener it is, the higher the limonene content," says Jha. Limonene has, in fact, been studied for its potential anti-inflammatory, antioxidant, anti-cancer, and heart disease-fighting properties in scientific circles.

The home of these bright green, juicy lemons is Jha's very own lush, 50-acre food forestry farm, Vanya Organics, on the banks of the Narmada river in Khalghat, Madhya Pradesh. The concept of

a food forest, as the name suggests, entails diverse planting of edible plants, where tall trees, small trees, shrubs, herbs, and ground cover grow together in harmony. "It's essentially a vertically integrated ecosystem comprising plants of various heights and root layers," he explains. The land is lush with thriving trees, with moringa lordling over patches of banana and barwani papaya—a local MP variety—interspersed with paan, lentil and chilli saplings. "The environment naturally attracts pollinators, which is why we get rich honey as well. The temperature on the farm is usually an average of 12 to 14 degrees Celsius," he shares.

Since the pandemic, trucks carrying gondhoraj lebu, vetiver root, neem and black turmeric from the farm have made their way across the country to be distributed among ailing officers of his department and regular citizens. "Black

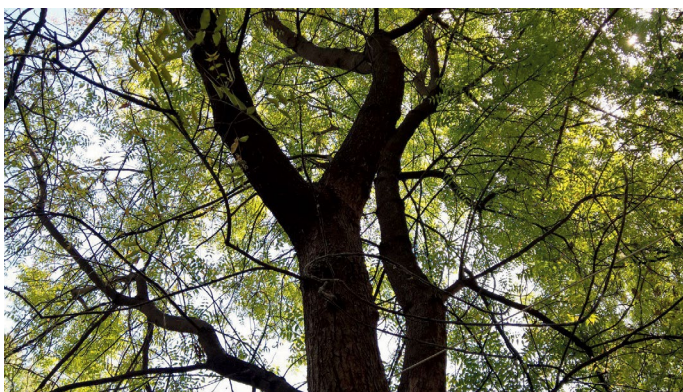
turmeric is beneficial to improve or treat lung illnesses such as asthma, bronchitis and pneumonia." Used by many tribal communities in MP, black turmeric has been listed as an endangered species by the Indian Agricultural Department. Efforts are being made to protect and conserve the herb in Odisha as well. Jha's WhatsApp inbox has witnessed a flood of 'thank you' texts from those who have benefited from his 'gifts'. He says that a concoction of guduchi, cinnamon, black pepper, clove and a few leaves of shyam tulsi, all boiled for 10 minutes, can be a great immunity boosting drink, that can also keep sugar levels in check.

At Jha's farm, every inch of soil is covered with vetiver, a densely tufted bunch grass, that doubles up as low-cost technology for soil and water conservation. "It can pull off

Fresh haldi and black turmeric are grown on the farm. The latter is especially useful to treat respiratory conditions like asthma, bronchitis and pneumonia



Continued on page 25



Neem is considered a miracle plant that demonstrates immunomodulatory, anti-inflammatory, antiulcer, antimalarial, antifungal, antibacterial, antiviral, antioxidant and anticarcinogenic properties

Continued from page 24

15 kg of carbon secretion per square metre—it basically takes CO₂ from the atmosphere and absorbs it into the soil. It also recharges groundwater and brings micronutrients to the roots of the plants. Then, there's moringa planted at the centre of the farm, which is a great source of Vitamins A, C, B1, B2, B6 and folate." Nature, he explains, has a knack of growing in an optimal pattern, utilising multiple layers and making the most of both horizontal and vertical space.

The idea to create a food forest took root when Jha, a 1986 batch IRS officer, read Masanobu Fukuoka's manifesto on natural farming, *The One Straw Revolution*, 18 years ago. Trained as a scientist, Japan-born Fukuoka rejected modern agricultural practices, deciding that the best cultivation method was that which mimicked nature's. Inspired, he and five other friends, bought a plot in village Akbarpur. "It has transformed from a wasteland to a self-maintaining ecosystem," he beams. According to him, a multi-pronged approach, that includes no tilling, no chemical fertiliser, no weeding by tillage of herbicides (weeds play a part in building soil fertility and in balancing the biological community), mixed cropping and mulching (applying a protective layer of a material on top of the soil), have made this possible. The effort is gradually turning into a movement, with 300 farmers across the country having joined in.

Jha's nephew, Meghatithi Kabeer, is the Global Creative Director for Films 4 Sustainable World, an organisation headquartered in France and dedicated to sustainability-related filmmaking. Since 2015, Kabeer



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Meghatithi Kabeer

has shot four documentaries on Jha's farm. "While working on some of my filmmaking projects around sustainability, I realised that ancient wisdom has a lot of power; it's what drew me towards documenting my uncle's farm." Kabeer clarifies that there is a difference between the haldi grown elsewhere and that inside a bio-diverse food forest. "It's not voodoo, just simple science. Because the soil is full of micro nutrients and rich with minerals, whatever grows is virtually medicinal." Kabeer is hopeful of the results of efforts being made across the globe to reverse our alienation from nature. He speaks of the Great Green Wall of Africa, a project looking to grow an 8,000 km natural wonder across the full width of Africa. This will combat desertification, or the process by which fertile land turns into desert due to deforestation and inappropriate agricultural practices. Kabeer says it's a big worry in the Sahel region, which runs from the southern belt of the Sahara to the Sudanian savanna below. While the Great Green Wall was initially intended to be just a line of trees, it has grown into a much larger project with multiple environmental interventions after it received funding from the African Union. "When I visited California in 2019, I was amazed to see how products in supermarkets are segregated into produce by large-scale farmers, organic farmers and biodiverse farmers. The last group is marked thus, so that consumers know that it has come from a permaculture system [an agricultural ecosystem built in a self-sufficient and sustainable way]."

As per reports, there are only three great forests left on the planet: Amazon Forest of Brazil, and the boreal forests in Russia and Canada. Kabeer argues that if we wish to survive, India, too, needs to reinvent the wheel and scale up efforts to create more food forests. "These [forests] are like Noah's Arc of our civilisation. Even if everything around us gets disrupted, we will have these symbols of hope. It is here that you will find biodiversity and be protected by the self-healing approach of nature."

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Man on a mission

Pune activist Sanjay Nahar's work in J&K has transformed lives. Now, he is rescuing Assamese kids from a human trafficking racket

PRUTHA BHOSLE

THE Kashmiri children and youth have enormous potential. I salute Pune and Maharashtra for accepting these children and accommodating them through Sarhad. Once their ordeal comes to an end, they can give direction to not just their state, but light a path for the country and world," said former President of India Late APJ Abdul Kalam in June 2005, as he referred to Pune-based NGO Sarhad.

Sarhad is a Persian word, meaning border or frontier. In 1995, activist Sanjay Nahar started this social organisation, after having worked closely with the people and authorities in two border states of India, Punjab and Jammu and Kashmir. "Through Sarhad, over a hundred orphans and below poverty line kids were brought from localities of strife-stricken Kashmir and were provided quality education in Pune," Nahar remembers.

Apart from the Valley, Nahar's attention was drawn to the north-east as well. "This was even before our NGO came into being, around the 1980s. The Asom Gana Parishad (AGP) agitation was in full swing back then. Over a period of time, we learned of the excellent work of the All Bodo Students' Union (ABSU) for the upliftment of the Bodo community in violence-hit districts of Assam. My work expanded here too," Nahar shares.

It is this journey of 26 years and the network Nahar created that helped him bust a human trafficking scam recently. At least eight youngsters, including a minor girl, were rescued by volunteers of NGO Sarhad and sent back to their homes in Assam. "In

the past few years, our work has reached the Bodo tribes in Assam, Kokrajhar and some other districts. Kids from these areas come to the Sarhad School in Katraj, Pune, to get quality education. Eight such teenagers were lured into J&K by a recruiting agency," Nahar tells us.

Little did the kids know that they were being scammed. Nahar continues, "A recruitment firm promised them high-paying jobs [₹8,500 per month] in apple farms and fruit-processing factories. They immediately agreed and left their homes. However, when they landed there, they were sent to estates and private homes to work as domestic labour. They were being treated badly, but there was no way out."

When Nahar and his team found out, they began a thorough investigation in the region. "With the help of our friend Aqib Bhat, president of Sarhad J&K Students' Association, we managed to communicate with the recruiting agency. They said the kids were bound by a contract and therefore, could not leave their jobs. We requested that

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Sanjay Nahar, founder of Sarhad



they be released, but in vain. Finally, in a few days, we managed to rescue the kids and sent them home via flight."

The NGO had informed the police about the scam, but figured out the rest of the logistics independently. "We thanked the cops for cooperating with us later, of course. But, our priority at the time was to get the kids home safe," he adds.

Now, Nahar has started to take up the issue of human trafficking and bonded labour-style employment very seriously. He believes about 1,000 more Assamese kids may have been similarly duped and sent to J&K by the recruiting agency. "We are in constant touch with ABSU's chief executive officer Pramod Boro to track these children. We will conduct a thorough probe in both the states and find out ways in which these kids can be given employment opportunities in Assam itself. Some of them are very poor, and their parents don't mind making their kids toil for a meagre amount in Kashmir. It is really unfortunate. We believe that it's a stable job close to home that will see them at peace," Nahar informs.

Nahar was only 25 when he started work to better the lives of common people in Kashmir. Almost 26 years later, he says his mission has only begun. "The time is ripe. There is lots left to do."

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Nahar with students from Jammu and Kashmir and the northeast at Sarhad School in Katraj, Pune