

Kerala's GI hunters provide stardom to unique crops

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Chengalikodan is a banana with a venerable past. An ancient document from a Tharavad household in Kerala mentions its history. It says Chengalikhodu was a tiny kingdom which was under threat. The rulers enlisted some families beyond the boundaries of their kingdom to stave off the enemy. When the war was over, the rulers suggested the families stay on and cultivate bananas. That's how the Chengalikhodu banana got its name. "It is a unique banana, sweeter than other **nendran** varieties and quite apart in looks and properties," says P.V. Sulochana who served for 15 years in Erumapetty panchayat in North Thrissur from where the banana originates. The Chengalikhodu banana now has a Geographical Indication (GI) tag, raising its profile and price. So do Pokkali rice which grows in saltwater, Travancore jaggery, rich in sucrose, iron and magnesium, two scented varieties of rice called Jeerakasala and Gandhakasala, and the Valakkulam pineapple, named after the place it originates from. Altogether seven unique plant varieties in Kerala have received GI recognition thanks to the earnest efforts of the Intellectual Property Rights (IPR) Cell in the Kerala Agricultural University (KAU). Led by the redoubtable Dr C.R. Elsy, a plant breeder professor, the IPR Cell has been scouting fields and farms in Kerala to identify breeders of unique plant varieties. Another four GI recognitions are in the pipeline. That's not all. The IPR Cell has succeeded in getting 17 Plant Genome Saviour Awards given to farming communities and farmers for conserving and propagating unique plant varieties. In 2014, 37-year-old N.M. Shaji, secretary of Pain and Palliative Care, an 18-year-old NGO in Wayanad district, received the Plant Genome Saviour award for his unique collection of tubers. Shaji believes that lifestyle and food habits need to change to counter the rise in cancer cases and that the past provides many lessons. His forefathers, he recalled, consumed tubers. For 12 years Shaji travelled across Kerala, looking for tubers. Today his prized collection surprises even tuber scientists. It was the IPR Cell that identified Shaji's achievement and enabled him to get this recognition. *Origins of the IPR Cell* More than a decade ago, the Indian Council of Agricultural Research (ICAR) directed all agriculture universities in India to constitute an IPR Cell. The job of the cell was to investigate, apply and facilitate protection of agriculture-related IPR. Three areas came under its purview — GI, Plant Genome Saviour Awards and registering unique plant varieties under the Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPV & FR).

Dr P. Rajendran and Dr Elsy receiving an award for recommending the highest number of Plant Genome Saviours in India Registration of farmers' plant varieties and decisions about the Plant Genome Saviour Awards is done at the Protection of Plant Varieties and Farmers' Rights Authority, under the Ministry of Agriculture, which is based in Delhi. The Geographical Indications of Goods (Registration & Protection) Act, 1999, came into force in 2003, an outcome of talks at the World Trade Organisation (WTO) of which India is a member. The Intellectual Property Office in Chennai processes GI applications and takes decisions. The IPR office comes under the Union Commerce Ministry. How many agriculture universities have functioning IPR cells is not known. But the one at KAU is in the forefront. Its performance in two areas of recognition for farming communities — the GI and Plant Genome Saviour Awards — is truly outstanding. KAU formed an IPR cell way back in 2003, even before the ICAR directive was issued. Dr Elsy was placed in charge. But this was not a full-time job. She was also expected to fulfil her routine duties as a plant breeder. Though her colleagues co-operated, the cell didn't have full-time staff, proper infrastructure or financial resources. It started a few awareness projects and began vetting GI applications. The cell's first GI effort was Pokkali rice, a variety unique to Kerala. It is grown in the coastal belts of Ernakulam, Alleppey and parts of Thrissur district where saline water intrudes into the land. Since the field is always doused with saltwater, using chemical fertilisers is futile. So this rice variety is always organic. Farmers go in boats to harvest it. What attracts farmers to Pokkali rice is an associated activity — fishing. Generally, rice is grown alternately with fish, in this case prawns. However, urbanisation is shrinking land under Pokkali cultivation. In 2007, the GI tag was granted to Pokkali rice. "Since we were just beginning, it took us a year to study the Pokkali system of cultivation on one side and the procedure of applying for GI on the other," recalls Dr Elsy. Cheruvayal Raman grows 52 indigenous varieties of rice. The cell's next success was the Valakkulam pineapple. In 2010 Dr Elsy and her colleagues succeeded in getting GI tags for two famous, scented rice varieties of Kerala — Jeerakasala and Gandhakasala. For both, the acreage under cultivation has been declining. In 2013, KAU prepared a blueprint for gearing up the IPR Cell's activities and sent it to the state government, pinpointing its successes. The government was impressed and sanctioned annual financial support. The IPR Cell now submits its proposal every year and after perusing it the government authorises financial support. This has made it possible for the IPR Cell to hire two research assistants on contract. The cell was earlier functioning from KAU's headquarters in Mannuthy, Thrissur, for two years. Recently, Dr Elsy was transferred to Pattambi Regional Agriculture Research Station (RARS) so new research assistants had to be hired. With Central Travancore jaggery, Kaipad rice and Chengalikhodu nendran banana receiving GI recognition, the IPR Cell has obtained seven GI tags for Kerala. Four more are in the pipeline — for Nilambur teak and teak products, Tirur Vettilla (betel leaf), Kuttiattoor mango and Marayoor jaggery

Marayoor jaggery being stirred

[Planting the idea](#) How does the IPR Cell get a GI tag granted? "We first identify a probable candidate for IP protection," explains Dr Elsy. "The candidate might have been found by us or proposed by any farmer group." One criterion that the cell ensures at this stage is that its efforts should benefit the larger farming community. If such chances are bright, a meeting of all producers of the concerned area is convened. Matters such as provisions for GI registration, benefits of protecting IPR and so on are explained. "If you are interested, we can support you, is what we tell them at the end of a preliminary meeting," says Dr Elsy. If the community is keen, a producers' society is registered before beginning the groundwork and paperwork. The cell's work then becomes easier. It has to interact only with the president and secretary of the society. But the formality of registering a society itself takes nearly a year. For instance, it has taken more than a year to form the Tirur Betel Farmers' Society. A bigger task is proving the uniqueness of a particular plant variety. During talks, local people attribute many specialities to their product. But getting scientific validation is not easy. "In many cases we don't get any written document to indicate how old the variety is or its uniqueness," explains Dr Elsy. "There is a clause that says GI can be granted based on the fame of the products too," she adds. To prove the qualities of Travancore jaggery, the cell got it analysed and compared to other kinds of jaggery made in Kerala. The Travancore jaggery proved to be richer in sucrose, magnesium and iron, factors which worked in its favour for getting the GI tag. Similarly, in the case of scented Jeerakasala rice, the IPR Cell compared its aroma to rice varieties grown in other states and found it to be unique. For both Jeerakasala and Gandhakasala scented rice varieties the cell was lucky to get its hands on old Malayalam poetry that lucidly extolled the qualities of both varieties.

The famed Chengalikhodu banana

The Chengalikhodu banana was compared to the other nendran varieties. The banana differed in many organoleptic characteristics. This banana has a long red patch of colour on the skin, and becomes so soft while cooking that it extrudes from both ends. It doesn't have a ridge. Plus, it is sweeter and its skin thinner. The Tharavad document helped the IPR Cell prove the banana's uniqueness and origin. The process of getting GI recognition for Nilambur teak and teak products is in its final stage. "The College of Forestry at Nilambur has already done studies on Nilambur teak and has enough data. This came in handy for us. In all the other cases, we had to start from scratch," says Dr Elsy. Sometimes luck also plays a role. For the Tirur betel vine, the panchayat had documents. But the cell is still scouting for documents to prove the qualities of the Marayoor jaggery. Maps and process A certified map showing where the product is grown is another document that has to be submitted. In some cases, the District Collector certifies this. In other cases, the Principal Agriculture Officer endorses it. But differences of opinion creep in, as in the case of the Kuttiattoor mango. Some locals argued that the neighbouring Kunhimangalam panchayat should be included in the map because it is cultivating the mango. "In such a situation, we convene a meeting of all stakeholders and proceed only after they reach a consensus. We try to be

objective and do justice to all concerned. The GI obtained through KAU is completely transparent,” says Dr Elsy. If there is a strong local team or agency the cell’s job becomes easier. In the case of Nilambur teak, there was a local agency so Dr Elsy visited the area only two or three times. Otherwise, multiple visits are required. The IPR Cell has also taught itself over the years on how to process GI applications. When the first GI application had to be submitted there was utter confusion. Nobody knew the right method. The cell approached lawyers. They asked for a fee of ₹40,000. Funnily enough, they too had no experience in submitting such applications and the IPR Cell had to constantly step in. Finally, the lawyers succeeded in just about filling in the application form. “We were in a fix. We didn’t have the money to pay. Neither did our farming communities. There was also no way they could recover this money had they managed to pay it,” recalls Dr Elsy. So she bought the GI Act book and thoroughly studied it. The cell now has enough experience not only to file its own applications but to advise others. “In fact, our first application was appreciated by the officers at the IPR office in Chennai. Currently, lawyers charge around ₹60,000 to ₹70,000 for processing one application,” says Dr Elsy. Along with the GI application, a logo for the product has to be submitted. To get people involved the cell conducted two logo competitions, for Pokkali rice and for Chengalikodan banana. The logo for their latest case — Nilambur teak — was also appreciated at the IPR office.

The Plant Genome Saviour The Plant Genome Saviour (PGS) Awards were launched in 2007. Initially, the awards were given only to farming groups. The IPR Cell got PSG Awards for Akampadam Chimpachala Padasekara Samithy (twice), the Palakkad and Pokkali Rice Farming Community in Ernakulam district and the Chengalikodan Banana Growers Association in Erumapetty, Thrissur. The award money is ₹10 lakh for a group and ₹1 lakh for an individual. The effort required to get the PSG Award is less strenuous. “If a farmer has conserved 10 to 20 varieties of a plant albeit for commercial purposes, it can be considered for the PGS Award. It doesn’t matter if they have brought these plant varieties from different areas,” says Dr Elsy. The 13 individuals who received the PGS Award through the efforts of the IPR cell have impressive records of conservation of different plant varieties, that too with social commitment. **NM Shaji with his prized collection of tubers from across Kerala** Shaji, for instance, was deeply concerned that young people between the ages of 25 and 35 were getting cancer.

Born in the third generation of a settler family from Ernakulam district, he learnt that it was consumption of tubers that helped his forefathers live long, energetic lives. Since his forefathers were only tenants they were given just a small portion of the paddy they cultivated on the landlord’s fields. They couldn’t afford to consume more rice. Naturally, a wide variety of tubers became their staple food. He has some tubers dating back to those years. His collection of rare tubers includes varieties like Nuroo, Arikelang, Naro Pullathi, Chore Kachil, Gandhakasala Kachil, Kappa Kachil, Choriyan Chemb and Makkal Pothi Chemb. The PGS Award has brought him much-needed recognition. Every day around five people, including students, farmers and scientists, visit his one and a half acre farm. “The very same society that ridiculed me as a lunatic now appreciates what I have done,” says Shaji with a sigh of relief. Cheruvayal Raman, 68, of Wayanad is another recipient. He painstakingly grows 52 indigenous rice varieties on five cents of land every year. Raman has studied up to Class 5. His uncle, who brought him up, disliked hybrid rice varieties. When the uncle passed away in 1989, he left behind four to five local varieties of rice as a foundation for Raman to build on. Raman grows 52 varieties organically. He gives away one or two kg of paddy every year for harvesting seeds. The only condition is that the recipient must grow the variety and pay by giving back some of the seeds. “Only a few persons keep their word,” says Raman. “But awareness is growing. Students and interested visitors keep coming to my farm. I go to different meetings, to colleges and so on to spread the message of rice diversity and the importance of conservation.”

Benny Mathew, 47, of Palakkad district, another awardee, wanted to acquire a large collection of pepper varieties since childhood. Some years ago he noticed new varieties growing on his land. They had come through bird excreta. That incident inspired him to search for new cultivars, mostly from the wild. Today his one hectare hosts 205 pepper varieties. “Some are very promising. I hope to release a few for farmers in the coming years,” he says with pride. He claims to have developed a few new varieties too. Then there is Sajeevan Kavumkara. He has been running the Eleyariv (Knowledge about Leaves) campaign for decades. His focus is on utilising edible leaves and local crops like tubers, mango, jackfruit in place of vegetables and fruits bought from the market. During his meetings Sajeevan demonstrates how food from local plants is cooked, thereby encouraging the spread of this culture. His homestead in interior Kannur district has hundreds of such plants, some cultivated and others wild. “Kerala homesteads can grow our own vegetables this way with a little effort. If we start using native edible leaves and crops we will help maintain biodiversity and our health,” he says. “Kerala has many more individuals who are eligible for PGS Awards. Conserving paddy varieties is tough and needs a lot of time-bound work every year as compared to collection of other crops,” Dr Elsy points out. “In India, Karnataka is leading in GI registration. The state has got 38 GIs out of which 16 are agri-related. Maharashtra stands second with 26 GIs,” says Chinnaraja G. Naidu, Assistant Registrar of Trademarks and GI, Chennai. “But as far as GIs obtained through state IPR Cells is concerned, Kerala stands on top. The only other state IPR Cell that has initiated the GI process with us is Assam. It has filed two applications. No other state IPR Cell has applied for GI so far. The KAU Cell is conducting good awareness programmes too. I myself have taken part in one or two.”

Literate farmers However, Prof. R.R. Hanchinal, Chairperson, Protection of Plant Varieties and Farmers’ Rights Authority, Government of India, New Delhi, is far from impressed. “If Kerala has bagged a lot of PGS awards, the credit goes to the literate farmers of that state. The PGS Awards are recognitions and don’t come under IPR. The Kerala IPR Cell has to gear up applications of farmers’ varieties. The agriculture universities and Krishi Vigyan Kendras all over the country are creating awareness about farmers’ rights over plant varieties. Yet the overall performance is disappointing. Jharkhand has applied for 2,066 farmers’ varieties and Chhattisgarh for 1,744. Bigger states like Karnataka have applied only for 192 and Kerala for just 54. Kerala is such a biodiversity hotspot. Far more applications should have been initiated from there.” Dr P. Rajendran, Vice-Chancellor of KAU, agrees that Kerala probably has many more eligible cases for IPR protection, considering the state’s biodiversity and its enterprising farmers. But the IPR Cell’s achievements are impressive. “We bagged seven out of 17 PGS Awards in 2013 and four out of nine in 2014,” he points out. But, as far as farmers’ plant variety registration is concerned, he says the university has a limitation of resources. “We can’t shoulder all the responsibilities. If the Agriculture Department takes up the rest of the work, we can analyse and offer scientific support for the claims made,” he says. Dr Elsy cites other issues pertaining to farmers’ plant variety registration. “Registering a variety in a single farmer’s name when it is grown by many is not fair. Identifying the areas in which one variety is grown is tough. Kerala is such a sensitive state that any wrong move will boomerang.” Though the mandate for the IPR cell is just to file the papers and get it processed, Dr Elsy and her team voluntarily follow the case further. For example, before PGS Award presentations, they ask for planting material sample, photos of the award-winner’s activities, and so on. “For farmers, even though they are literate, filing the necessary papers in the right way and following those up isn’t easy,” she says.

Markets found and lost The PGS Awards are often announced at the last minute. Then there is a scramble for train tickets. Dr Elsy opts to travel with the farmers instead of taking a flight so that she can help out with language and other issues. When the IPR Cell started 15 years ago, many among the faculty saw it as an unnecessary burden. “They believed the university’s responsibility was limited to increasing crop production. The very same section has now realised that we have to support farmers even in protecting their rights,” Dr Elsy observes. The Kerala Governor, hearing about the KAU IPR Cell’s achievements, invited all award-winners to Raj Bhavan, to honour them. The MS Swaminathan Foundation at Wayanad also honoured them. But does GI protection benefit the farmer? “This is a question we invariably encounter. My answer is simple. Think like this. You own some land. If you just sit back carelessly, thinking you have the document records, you are taking a risk. Instead, if you erect a proper fence all along the land, you will establish your ownership. Similarly, GI protects your interests regarding your unique product.” Recognition has helped the Chengalikodan banana. Farmers from different parts of Kerala, even from Kasaragod in the far north, are asking for Chengalikodan banana suckers. KAU is producing the banana’s tissue culture plants small-scale. Private nurseries have included it in their list. **Beeran Kutty with his amazing betel vines** Chengalikodan *nendran* used to be priced at just ₹2-5 per kg more than the usual *nendran* variety. But, in the last season, the difference in price increased by ₹15-20. Farmers in the adjacent region have already started growing this variety in new areas. Farmers who grow Chengalikodan have organised themselves into the Chengalikodan Growers Association. One of them has donated land for the society. The team plans to build an office there. “A normal Chengalikodan banana bunch has 50 fruits and weighs around 25 kg. The harvesting season begins two months before Onam and continues for two more months after the festival,” explains K. Vijayan, Secretary of the Chengalikodan Growers Association. “Most farmers cultivate it in an area less than one acre. One concern is this variety is easily susceptible to disease. Yet, in five block panchayats, this variety is being

grown on an estimated 2,000 hectares." Trade enquiries start pouring in once the local media writes about the winners. But the Achilles' heel of farmers is marketing and organising. Be it Pokkali rice, Gandhakasala rice or Travancore jaggery, the farming community is just not able to supply its product in an organised manner. The IPR Cell is now mulling opening a separate office, putting up a website, and raising capital to stock and process such products and sell online. "Getting a certificate is enough. That should facilitate the farming community in augmenting income. But it requires expert intervention and guidance to train farmers in organised marketing. This area needs very serious action," adds Dr Rajendran. The performance of the KAU IPR Cell is truly laudable. It has stepped out of its comfort zone to help farmers. What is really significant is its mindset and zeal. Sadly, such commitment is lacking in most of our agriculture universities. First published by

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