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PAAN'S ROYAL FALL

People now prefer gutkha
and farmers other crops

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Paan loses flavour

Iconic *paan* no more appeals to farmers, traders and common people. They say the contagious spread of chewing tobacco, especially *gutkha*, is fast taking over the *paan* market. Farmers have more reasons to shy away from the crop once referred to as green gold. Skyrocketing input costs, water scarcity and unpredictable weather mean betel gardens are no more lucrative.

RICHARD MAHAPATRA, SAYANTAN BERA and **MOYNA** travelled to betel leaf gardens of Uttar Pradesh, West Bengal, Odisha and Delhi and visited *paan* markets to understand the fate of the cash crop considered ideal for small farmers

The way *paan* is associated with India, a Chaurasia is associated with *paan*. But both the equations are changing, said Lalta Prasad Chaurasia, spitting blood red betel juice into an elegantly designed brass spittoon. The 58-year-old is among the last generation of Chaurasia farmers in Mahoba district of Uttar Pradesh who have witnessed betel leaves

yield a fortune. Both betel leaves and the Chaurasias are an integral part of Mahoba's history. The district is known for its betel gardens and the Chaurasias are India's exclusive community devoted to betel farming. But they are now finding it difficult to sustain the family occupation.

Till a decade ago, Lalta Prasad's betel gardens extended over a hectare

Mukund Chaurasia is among the 200-odd farmers of Mahoba who still grow betel vine. The Chaurasias are the exclusive community devoted to betel farming. In the past decade over 500 Chaurasias in the district have quit the family occupation



VAIBHAV RAGHUNANDAN / CSE

(ha). Now his son grows the vine on just a third of the farm. Kamlesh Chaurasia, another young farmer in Mahoba, has reduced his farm size to a decimal (0.004 ha) from nearly a hectare of betel garden he inherited a decade ago. "It is difficult to manage even this small patch," he said. The region is suffering from seven years of drought.

Betel leaf cultivation requires regular watering: four times a day in summer and twice a week in winters. So the gardens are traditionally situated near water sources. But the prolonged drought has dried up most ponds and dug wells in Mahoba. Every day Kamlesh walks about 50 times to a nearby drain to fetch water in a vessel to irrigate his farm. "I can't afford a diesel pump or labourers. But I have to depend on the farm as it gives me some income throughout the year," said Kamlesh who earns about ₹400 a month. "Sticking to betel leaf will not be a good idea. As such, fewer people consume *paan* these days."

Once every three days, Kamlesh plucks tender betel leaves from his garden, neatly stacks them in a basket and takes them to a 200-year-old *paan mandi* (betel leaf hub) in the district headquarters. It is called Paan Bazaar.

Till a decade ago, as many as 100 traders from across the country would visit the Paan Bazaar every day to bid for the famous Mahoba *paan*. But over the years the hustle and bustle has died down. The godown built to store betel leaves is in ruins. The *paan* shops around are mostly owned by people who have abandoned betel farming. But more than *paan* they sell *guthka*, a concoction of areca nuts, tobacco, lime and flavours. In 2005, the local betel leaf traders' association decided to trade only thrice a week. "Since betel leaf cultivation has drastically come down, there was no need for a regular market," said Rakesh Chaurasia, a member of the association. The market is now called *subzi* (vegetable) market.

Betel cultivation is declining in the state, said D S Yadav, district horticulture officer of Mahoba. Uttar Pradesh is the largest consumer of *paan* and 15 districts grow the vine on 2,000-2,200 ha. In Mahoba alone, Yadav said, 800 farmers were growing betel on 180 ha in 2000. Just 234 are growing the vine on 80 ha this year. In Lalitpur district, the



SAYANTONI PALCHOUHURI / CSE

Short biography of *paan*

Paan, for Indians, is more than just an assortment of betel leaf, areca nut, lime and catechu and other spices. It is a symbol of purity and prosperity. It is used in many rituals, especially those related to marriage. Guest treatment is incomplete without it. Researchers say *paan* is the favourite pastime of 15-20 million Indians.

Some 40 of the 100-odd betel varieties found in the world are grown in the country. More than 25,000 million leaves are produced every year on 40,000 ha of farms across the country, barring a few northern and north-eastern states.

Its use in India dates back to 400 BC. As per ancient books of Ayurveda, *Charaka*, *Sushruta Samhitas* and *Kashyapa Bhojanakalpa*, the practice

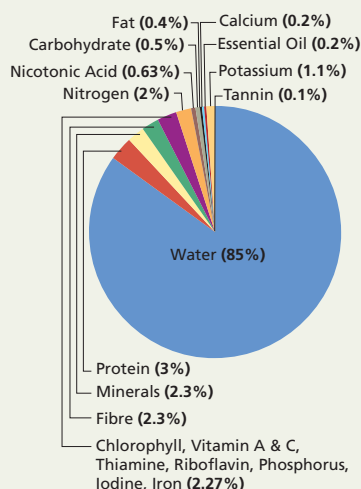
of chewing betel leaves after meals became common between 75 AD and 300 AD. Towards the 13th century, European traveller Marco Polo recorded, betel chewing among kings and nobles in India. Over the period revenue distribution systems were introduced to support *paan* expenses of the royalty. French traveller Niccolao Manucci referred to Mughal emperor Shah Jahan allocating the revenue of Surat for meeting the *paan* expenses of his daughter. Ahom monarchs, who ruled Assam till the 19th century, created a band of specialised servants for preparing *paan* for kings and their visitors.

With the passing of time *paan* became an integral part of the Indian culture. Traditionally consumed to aid digestion and as a coolant, betel is known to have 50 medical uses. Till 2010, nine patents had been granted for its properties to treat ailments like leukaemia, diabetes and kala-azar.

Though its cultivation is confined to tropic and subtropic areas in South and Southeast Asia and Africa, its appreciators are spread all over the world. Nearly 600 million people worldwide consume *paan* every day.

Last year, India exported betel to 28 countries. Pakistan is the biggest importer of Indian betel. It is said a betel leaf trader in Kerala is more worried about the Indo-Pak relation than the spat between the state's Communist Party and the Congress Party at the Centre. But in the past five years betel exports to Pakistan have dipped by half.

Nutritional composition



area under betel leaves has decreased by 20 ha in the past one year. "The continuous decline is due to several reasons beginning with extreme weather and shortage of water," said Yadav. For instance, the sudden dip in temperatures between January 1 and 12 this year ruined over 80 per cent betel vines in Mahoba. Officials said the area under betel cultivation is set to shrink further because farmers are now left with very few cuttings to begin a new crop. Once planted, the perennial crop can be harvested for four-five years.

The trend of chewing *gutkha* has also influenced the fall in demand and cultivation of *paan*, Yadav added.

Chaurasia's Odisha venture

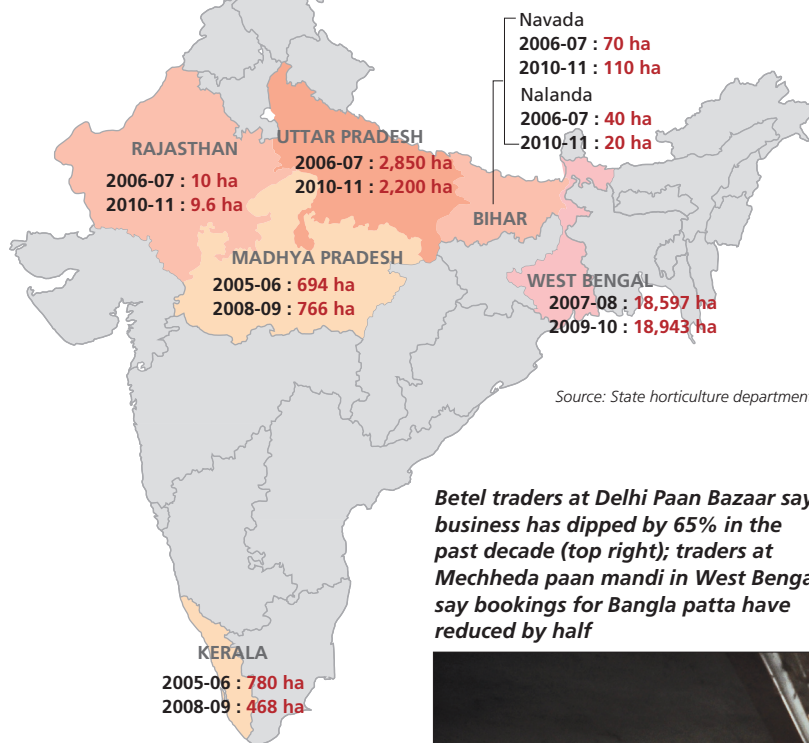
Betel leaf is not losing its charm for farmers in Uttar Pradesh alone. A few hundred kilometers away, another Chaurasia has severed his traditional link with betel leaves. Guruprasad Chaurasia's father had left his ancestral home in Gorakhpur in Uttar Pradesh in the 1950s to make a career in the booming betel leaf trade. Jaleswar town in Balasore district of Odisha gave him a head start. But within a generation, Guruprasad is out of the family trade. He now repairs televisions and runs a grocery store.

Till a decade ago, Guruprasad recalled, scores of supply agents would procure the Jagannathi *patta* (leaf) from farmers in Jaleswar and supply to *paan mandis* in Lucknow, Varanasi, Mumbai and Delhi. The supple variety of betel is grown on the sandy soil of Odisha within half a kilometre from the coast. Its cultivation was strengthened by the arrival of businessmen like Guruprasad's father from Uttar Pradesh in the 1950s. During the mid-1980s, a family could earn as much as ₹20,000 a month from a three decimal farm, or *baraj* as it is called after the migrant Barajia community from West Bengal who introduced betel cultivation in Odisha. That was the time when even fishers set up betel farms in their homestead land. About 3,000 baskets, each stacked with 2,000 leaves, were traded daily in the entire Jaleswar town, recalled Guruprasad. Unsure of prices, agents now hesitate to send even 50 baskets, he added.

"Prices nosedived in the past couple of years. I incurred a loss of ₹2 lakh in 2008 and have since shifted to a *pucca*

Shrinking betel gardens

Madhya Pradesh and Navada district of Bihar are exceptions where betel farmers receive state aid



Betel traders at Delhi Paan Bazaar say business has dipped by 65% in the past decade (top right); traders at Mechheda paan mandi in West Bengal say bookings for Bangla patta have reduced by half

'Hardly any farmer in the block has set up a new betel farm in the past few years'

—BALAI MOHANTY, betel farmer, Bhograi block, Balasore

(proper) business. It's no longer fashionable to chew *paan*. The young generation likes *gutkha* and cigarette," Guruprasad said, artfully tucking a *paan* in his cheeks.

Guruprasad is not the only victim of the shrinking market. In 1990 more than 200 supply agents were operating out of Jaleswar. Only 15 are still in the business. They have mostly confined their business to the processed form of betel leaf, called the Banarasi *patta*. It commands a high price in the market.

Processing the Banarasi *patta* is a delicate task. One has to neatly pack the leaves in a cane basket after a generous sprinkling of water and cover them with wet jute bags. The basket is then put in



SAYANTAN BERA/CSE



SAVANTONI PALCHODHURI/CSE

an oven with charcoal burning in one corner. This is called *paan bhatti*. As heat de-humidifies the leaves after three rounds of heating and cooling, they turn pale yellow and thin. They last longer, for up to a month. The processing also imparts a sweet taste, making it a favourite among connoisseurs. Declining betel demand has also affected the processing units. Barely five of the 100 *paan bhattis* in the town are operational.

Afsin Ali, 40, is one of those who burnt their fingers in the processing business. In 2007, he invested ₹5 lakh from his hard-earned savings and borrowed from betel farmers to set up a *paan bhatti*. He made a profit of ₹1 lakh in the first year. But the market crashed during the summer of 2009. "Since production goes up during summer, the market usually slumps. But that year it was unpredictably steep," said Ali. He received only ₹5,000 for the ₹40,000

worth of consignment he had sent to *paan mandis* in Uttar Pradesh. At times the consignment would rot and he would have to shell out ₹1,000 to dispose it of at a garbage dump. Last year, he gave up the business and started working as an insurance agent.

The horticulture department of Odisha has no records of betel leaf production and trade in the state. However, Balai Mohanty, a betel farmer from Bhograi block in Balasore district, said those who have betel farms are sticking to them as market price is sufficient to meet the running cost. But hardly any farmer in the block has put up a new farm in the past few years, he added. "Betel is not as lucrative as it used to be."

No buzz in mandis

Wholesale *paan* markets across Uttar Pradesh, West Bengal and Delhi retell the story of India's diminishing status as the largest betel leaf producer and consumer.

Take West Bengal that accounts for two-thirds of the betel production in the country. Its Bangla *patta* is famous for the spicy taste and is in demand from several Asian countries, including Bangladesh. But bookings for Bangla *patta* have gone down by half in the past 10 years, said Chandi Charan Samanta, secretary of the traders' association of the auction hub of Mechheda in East Midnapore district. Earlier, traders from Delhi and Mumbai would book consignments every day. But these days they make bookings on alternate days and at times even twice a week, Samanta added.

Rajeev Goel, member of the Delhi *paan* traders' association, offered a few figures. Till 1998, the Delhi Paan Bazaar, that supplies betel leaves to the entire city, received 8,000-10,000 Banarasi *patta* baskets every day, each carrying 1,000 leaves. By 2005, the market received 9,000 baskets only five days a week. The number has decreased further to 8,000 thrice a week since 2008.

Betel trade has fallen by 35 per cent in Uttar Pradesh, reckon traders' associations in Lucknow. The district has the second-largest betel market in the country after Varanasi. Farmers prefer to grow crops that give assured returns, said Shyam Prasad Chaurasia, owner of the *paan mandi* in Lucknow. At least



200 farmers who used sell betel leaves at his *mandi* have shifted to other trades in recent years.

Blame it on *guthka*

As per the Economic Survey of India, about ₹800 crore worth betel leaves were traded in 2000. The trade has dipped by 40-50 per cent since, say traders' associations of Uttar Pradesh, West Bengal, Odisha and Delhi, though there is no official record. "Data on betel is not collected as it falls in the unorganised sector," said Jose Samuel, chief consultant at National Horticulture Mission, Delhi.

Last decade is also the period when India witnessed a sharp increase in the consumption of chewing tobacco, especially *guthka*. According to Euromonitor International, a London-based market research firm, 484,000 tonnes of chewing tobacco was sold in 2004. The sale went up to 639,000 tonnes in 2009. Break down the amount into six grammes, which is the standard weight of a tobacco sachet, and India consumed 80 billion tobacco sachets in 2004 and 120 billion in 2009. According to WHO, 45 per cent adult Indians were hooked to smokeless tobacco consumption in 2009.

Guthka invaded the Indian market in the 1990s. At roadside kiosks it is as ubiquitous as tea. The success of the ₹10,000-crore *guthka* industry is due to its easy availability, smart packaging, high shelf-life and low prices; the rate of a sachet has been ₹1 over the past 10 years. Besides, *paan* is a varying commodity, while *guthka* has a uniform taste, said Subhash Gupta. Once a *paan* seller, Gupta now sells *guthka* in Delhi's Paan Bazaar. As many as 80 *paan* sellers in the market have shifted to selling *guthka* in the past decade.

Retailers say it is easy for a bus driver or labourer to pick up 20 sachets on the go. To pick up 20 quids of *paan* they would have to wait for at least 10 minutes while the leaves are washed, garnished and rolled. Satish Kumar, who has been running a *paan* kiosk in Lucknow town for more than 20 years, said 12 years ago he used to sell over 400 betel quids in a day. "These days people hardly ask for betel quids, so I started selling *guthka* alongside *paan*. I sell at least 100 packets of *guthka* a day, each containing 60-100 sachets," Kumar said. "People prefer *guthka* because it is cheaper and more fashionable than red-stained lips."

Too costly to grow

High input cost and erratic weather take toll

Betel leaves were once dubbed green gold. But farmers do not find betel farming lucrative anymore. Besides low demand, it is the rising input cost, primarily for irrigation, that is discouraging betel farmers.

Since it is a tropical plant, growing betel in the subtropical climate of India requires extra care and attention. So farmers grow it in a greenhouse where they can maintain humidity of 40-80 per cent, and temperature between 15°C and 40°C. The greenhouse, which looks like a rectangular hut, is typically made up of bamboo and cane or covered from all sides by mats of dried coconut leaves. The roofing is of hay, dried grass and coconut leaves. Inside the enclosure, rows of thin bamboo or jute sticks are placed, usually a foot apart, each offering support to a single vine. As it grows, it is entwined on the stick. To keep the sand moist and maintain the inside temperature and humidity, farmers need to sprinkle water regularly, at least four times a day in the summer and twice a week in winters.

Farmers say the cost involved in watering has become a major hurdle in betel farming lately. "Earlier, water was not a cost to bother as it was available year round," said Lalta Prasad Chaurasia of Mahoba. His son spends ₹30,000 a year to water an acre (0.4 ha) of farm.

With rainfall becoming increasingly erratic, ponds do not hold sufficient wa-



SAVANTAN BERA / CSE

Betel is vulnerable to weather changes

ter all year round, said Balai Mohanty, a betel farmer from Bhograi. In summer he depends on borewells, as deep as 12 metres, to water his two farms of 12 decimals each. This pushes up the diesel cost. Betel farmers in Jaleshwar estimate watering accounts for 20-30 per cent of the total cost (see tables).

Betel is vulnerable to even the slight-

Cost of setting up a betel garden

Items (for 10 decimal or 0.004 ha)	Costs in 2000 (₹)	Costs in 2010 (₹)
Soil for elevation (2 ft high from ground to prevent submergence)	500	2,000
Bamboo and other grass for the outside structure	5,500	17,500
Organic fertilisers and pesticides	500	1,000
Chemical fertilisers and pesticides	2,500	5,000
Stem cuttings of betel for plant propagation	4,500	15,000
Stick on which the plant climbs	2,000	4,500
Pumpset for water supply from nearby sources	7,000	15,000
Labour costs	4,000	15,000
Total initial investment	26,500	75,000



est weather change. “*Paan* cannot be harvested if temperature goes beyond 40°C,” said Santanu Patra, owner of Subarnarekha, an agri-marketing company in Balasore, adding, “15 years ago

the maximum temperature in Odisha would be 35°C. But last year it touched 42°C. Betel leaves turned yellow and dropped prematurely.” Rainfall is no longer uniformly distributed. Patra said

in five days Balasore receives rains that should have been spread over two months. “The resultant water-logging can perish the garden in four-five days.”

Recent increase in the cost of labour and farm inputs has added to betel farmers’ woes. For instance, to put up a betel greenhouse, a farmer needs stacks of bamboo sticks. Earlier, state governments used to provide bamboo at subsidised rates. But the practice has stopped in most states. Farmers say buying bamboo from the market costs them three-four times the subsidised price. Besides, they are not always available in the market. Other raw materials like cane and jute sticks have also become scarce and hence expensive. Betel farmers of Jaleswar estimate the cost of constructing a betel garden has increased by more than three times in the past decade—from ₹5,500 to ₹17,500.

Add the increased cost of labour to this. Betel cultivation is labour-inten-

Running and maintenance cost

Items (for 10 decimal)	Costs in 2000 (₹)	Costs in 2010 (₹)
Climbing sticks replaced every 3 months	1,500	4,000
Fertiliser, pesticides, fungicides and hormones	500	1,000
Repairing outside structure	300	1,000
Labour cost every 3 months (2 labours twice a week @ ₹150 per day)	2,000	7,500
Diesel cost for three months	400	1,000
Total cost of maintenance	4,700	14,500

Average annual income

For 10 decimal	Profits 2000 (₹)	Profits 2010 (₹)
First harvest in 3 months	1,500-3,000	2,000-4,000
Subsequently, every 2 weeks	1,500-3,000	2,000-4,000
Average annual income	36,000-72,000	48,000-96,000

Note: All calculations done according to farmers in Jaleswar, Balasore district, Odisha

sive. A betel leaf garden requires frequent watering, plucking of leaves, applying fertilisers and pesticides and maintenance of the enclosure.

From organic to chemical

Low demand and high-input costs are already driving betel farmers to switch from organic manure to chemical fertilisers and growth hormones.

Farmers from Khejuri block of East Midnapore say using organic manure, usually a concoction of cow dung, vermin compost and oil cakes of mustard, groundnut and neem seeds, costs them ₹36,000 per acre (0.4ha). Chemical fertilisers bring down the cost by less than half. It also helps them harvest the first batch of leaves within a month of setting up the garden instead of two-three months. Weekly plucking goes up from twice to three times. Most betel farmers in West Bengal shifted from organic to chemical fertilisers after cyclone Aila ravaged betel producing districts of East Midnapore and 24 Parganas in 2009.

Heavy downpour and gusty winds brought by Aila destroyed most betel gardens. A basket of 20,000 leaves, which would have otherwise sold at ₹8,000-₹12,000, sold for ₹40,000 once trading resumed, recalled Nadu Gopal Das, a betel farmer from Khejuri. Farmers,

‘Betel is a suitable cash crop for small farmers, despite high input requirement’

—P GUHA, IIT Kharagpur

who were rebuilding gardens, started using chemical fertilisers profusely to forge a profit from the high price.

But parting with organic method has proved to be a loss-making path. Traders at Mechheda auction hub complain the quality and longevity of the pungent Bangla *patta* has reduced lately. According to trade association member Chandi Charan Samanta, “With organic cultivation betel leaves stay fresh for almost 15 days. But with more use of chemicals they are turning yellow in just seven days. This is the reason a basket of 20,000 organic leaves can command a

Vine guards of Odisha

Betel farmers of Odisha are known to engage in protracted struggles whenever their betel vines are threatened.

In 1985, Balasore district saw the beginning of a movement led by betel farmers against the National Missile Testing Range proposed at Baliapal and Bhograi blocks. The government wanted to acquire 10,200 ha farmland that harbours the famous Jagannathi *patta*. The residents erected barricades and blocked entry of officials. The government shelved the project for the time being. Four years later, it again tried to acquire the area. About 8,000-strong police and paramilitary force marched to the blocks. Confronted by women and

children, they withdrew. Eventually the project was shifted to Chandipur.

For the past six years, betel farmers are leading another such protest against South Korean giant POSCO’s steel plant project in Jagatsinghpur district. It will affect 22,000 people in Dhinkia and Gada Kujanga panchayats who depend on fishing, cashew plants, paddy fields and betel vines. The region boasts a light yellow, mild-in-taste betel variety, Kujanga *patta* and has over 400 betel gardens. Estimates show the total betel leaf business in the region could be worth ₹8-10 crore a year. Small wonder the betel farmers rejected the government’s compensation of ₹11.5 lakh per acre (0.4 ha), saying the vines offer much better economic support.

whopping ₹51,000 compared to the chemical variety that hardly fetches ₹19,000.” Still most farmers are opting for cheap chemical farming because it helps them quickly recover the high initial investment and minimise the loss in case of a slump in the market.

Support for ‘family bank’

Farmers say the government needs to recognise betel leaves as an important trading commodity and offer them support. “It is true we do not pay taxes like the tobacco industry producing *gutkha*, said Veer Kumar Chaurasiya of Lucknow. “But if we are given a little support in terms of insurance or infrastructure betel leaf trade will flourish and we will be willing to pay taxes as required.”

D V Amla, deputy director of the National Botanical Research Institute (NBRI) in Lucknow, said in 1981 the institute worked with Mahoba farmers on a government-sponsored project to improve betel leaf cultivation. They had offered suggestions like using plastic sheets instead of thatched roofs. But the government scrapped the project due to shortage of funds in 2000.

In February this year, the state horticulture department submitted a proposal to improve betel cultivation. It has sought ₹15 crore as financial assistance to betel farmers in Uttar Pradesh. Till date, Madhya Pradesh and Bihar are the only states offering financial assistance to betel farmers. Madhya Pradesh offers

₹30,000 or half of the cost of setting up a farm to each betel farmer and is sponsoring a betel vine project. The impact is evident. Area under betel has gone up from 694 ha to 766 ha in five years. In Bihar’s Navada district, the horticulture department has been disbursing ₹15,000 per half-a-decimal farm since 2008-09. Area under cultivation has since increased by 40 ha (see map on p32).

P Guha, professor of agriculture and food engineering at IIT Kharagpur, West Bengal, considers betel a suitable cash crop for small farmers, despite high input needs. One can set up a betel garden on a three decimal area. A farm of 10-15 decimals can provide considerable net profit for a family of five, that too for 10 to 30 years, as per Guha, one of the few researchers in India who have studied the crop and its productivity. He calls betel farms household banks.

Although betel cultivation began in India 1,500 years ago, the country has not improved the cultivation technique since, nor identified its industrial uses, said Nikhil Kumar, retired scientist with NBRI. According to Kumar, the decreasing popularity of betel is the direct result of looking at the commodity based on its misuses and not its uses. “The first image that comes to our mind when we think of betel is the red spit and stains. But there is more to it. It has been scientifically proven that chewing of betel leaf releases adrenalin thus making the mind instantaneously alert,” said Kumar. ■