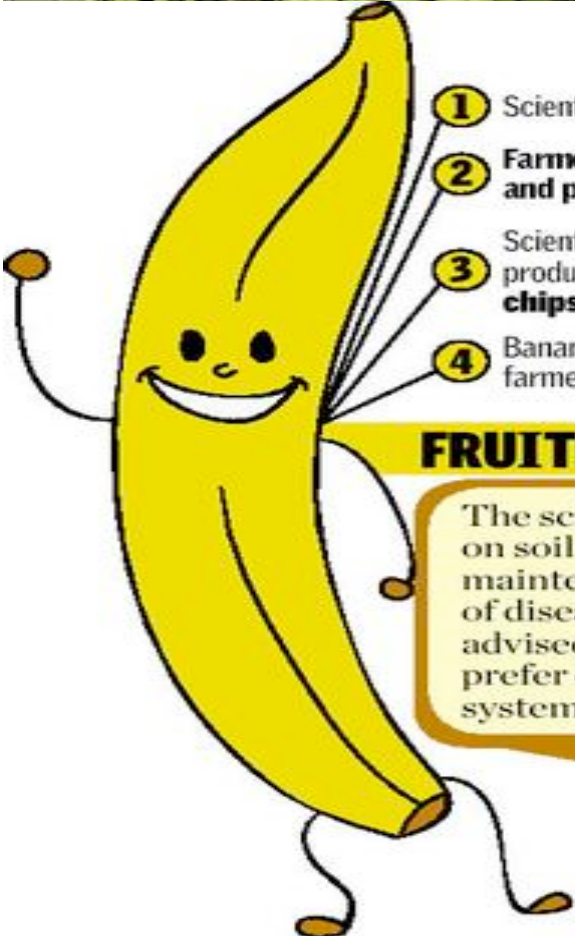


DATE: 11.11.2014

# THE HINDU

## NRCB shows the way for banana farmers




- 1 Scientists train farmers in banana cultivation
- 2 Farmers get exposed to seed selection and post-harvesting methods
- 3 Scientist displays methods of value added products including **banana fibre, drink, chips, wine and jam**
- 4 Banana farmers also learn how Tamil Nadu farmers tapped the overseas market

### FRUITFUL ENDEAVOUR

The scientists mainly focused on soil management, crop maintenance and identification of disease, and they also advised the farmers to prefer drip irrigation system with fatigation tanks

**SURESH VESAM,**  
Director, Netham (NGO)



The National Research Centre for Banana (NRCB), Trichy, one of the India's premiere research institutes in the field of agriculture, has trained farmers belonging to Krishna district in pre and post harvesting technologies in banana cultivation and processing.

A group of twenty farmers actively involved in banana cultivation in Thotlavalluru mandal was groomed in value added products of banana by the scientists last week. Inspired by a strong local banana marketing system owned and being run by the Krishna district farmers, the National Bank for Agriculture and Rural Development has ensured them the 'scientific training cum exposure visit' under its Capacity Building for Adoption of Technology Programme.

NRCB Principal Scientist Dr. Kumar had shared his scientific experience with the farmers, enabling them exposure to existing technologies meant for seed selection and post harvesting methods. "Scientists mainly focused on soil management, crop maintenance and identification of disease. They also advised the farmers to prefer drip irrigation system with fatigation tanks," said Netham (NGO) Director Suresh Vesam who led the farmers.

On the other hand, another scientist Dr. Siva had displayed preparation methods of value added products developed from banana – banana fibre, drink, chips, wine and jam. The farmers were told the export potential of the selected value added products. The training included visit to various banana units in Trichy district of Tamil Nadu.

The success story of Solar Dryad Banana Unit in Trichy, a pilot project encouraged by a German Bank -- KFW, helped the Krishna farmers to explore areas in banana cultivation and marketing to register growth in their income. The farmers also learnt how Tamil Nadu farmers tapped the overseas market for banana and its value added products, which is being exported to Philippines and other European countries.

## NABARD, Origo pact to benefit farmers

*Bridge loan to help avoid distress sale of farm produce. In Andhra Pradesh, the scheme will be extended to the districts of Krishna, Kurnool, Guntur besides East and West Godavari in the upcoming harvest season.*

The National Bank for Agriculture and Rural Development (NABARD) and Origo Commodities have forged a memorandum of understanding that will help farmers in Andhra Pradesh and Telangana State avail themselves of a bridge loan against the agri produce and thereby avoid distress sale.

A press release on Monday said the farmers could pledge the produce under negotiable warehousing receipt financing. It involves depositing the harvested crop at a warehouse, closest to his farm, and get financing from banks up to 75 per cent of the commodity's value. "This scheme enables the farmers obtain a bridge loan at low interest rates thereby avoiding distress sale... sell the produce when the price is right," the release said.

The MoU will enable farmers use the warehousing infrastructure of Primary Agriculture Cooperative Societies (PACS) and also the 100 plus warehouses managed by Origo Commodities across the two States. In Andhra Pradesh, the scheme will be extended to the districts of Krishna, Kurnool, Guntur besides East and West Godavari in the upcoming harvest season. According to the release, a similar initiative last year, small and marginal farmers were able to realise 20 to 30 per cent higher price in Telangana.

NABARD chief general manager (Andhra Pradesh and Telangana regional office) Jiji Mammen said the initiative also focuses on Warehousing Development and Regulatory Authority (WDRA) accreditation to help farmers get post harvest loans at seven per cent with interest subvention.

Origo Commodities director Sunoor Kaul said the company would put all efforts to facilitate the requisite infrastructure, pertaining to post-harvest in rural areas, to benefit the farmers and transform the supply chains.

## **Budget high on ambition, low on allocations: TDP**

The Rs.1 lakh-crore budget of Telangana State offered precious little to implement its ambitious programmes -- be it revival of agriculture, overcoming power crisis or addressing acute regional imbalances in the State, said Telugu Desam MLC Potla Nageswara Rao here on Monday.

Participating in the budget discussion in the Legislative Council, Mr. Nageswara Rao exposed the chinks in the Telangana State's maiden budget and said some of its programmes like Haritha Haram for improving forest cover and distribution of three acre agricultural land to dalits were mutually contradictory.

The budget was silent on how and from where the government would procure land for distributing to dalit farmers. The average landholding decreased from 1.3 hectares in 2005-06 to 1.1 hectares in 2010-11 and 68 per cent of farmers in Telangana were marginal farmers. Could one increase landholding overnight like budget, he wondered.

Mr. Nageswara Rao said the budget failed to spell out concrete measures to strengthen the agriculture sector with over 55 per cent of people depending on it but only contributing 14 per cent to GSDP.

### **Widening gap**

Deploring that the budget proposals have nothing to bridge the gap between the demand and supply of energy, he said while demand was increasing by 11 to 14 per cent a year -- 700 MW, there was no allocation to proportionately increase generation. The key irrigation, health and Road and Building sectors ended up with meagre allocations, he said.



Dr. K. Nageshwar (PDF) expressed apprehensions that with a 17 per cent of fiscal deficit, imposition of taxes, more borrowings and cut on welfare programmes could become inevitable. The crisis-ridden power sector got only two per cent of budget allocations.

While the burden on power subsidies was Rs. 6,300 crore, the revenue shortfall was about Rs. 3,200 crore and by 2015-16, power subsidy bill would be around Rs. 10,000 crore and power tariff increase would be another challenge.

Barring Rs. 5,000 crore for loan waiver, the allocation for the agriculture sector was less than that of in the combined State, he said. On land to dalit farmers, he said no proper exercise was done on that. There were three lakh dalit farmers and nine to 10 lakh acres were required. The government would require Rs. 50,000 crore to purchase land and with allocation of Rs.1,000 crore, it would become a 50-year project. The KG to PG programme too had no funds and how could Telangana be transformed without education and skill development. The government should ponder on this, Dr. Nageshwar said.

## Owners of mechanised harvesters make hay in Erode

*110 machines to be used for harvest of Kuruvai crop*



INEVITABLE: Machines are being transported to Gobichettipalayam in Erode for mechanised harvesting of paddy crops, due to manpower shortage.-  
PHOTO:M.GOVARTHAN

Start of harvest season in Gobichettipalayam and T.N. Palayam block has heralded a busy schedule ahead for owners of mechanised harvesters.

Nearly 110 machines would be used for harvest of Kuruvai crop covering about 5,600 hectares in the two blocks, according to official sources. Unlike manual harvesting that warrants 15 man days in an acre, mechanised harvester completes the task in just an hour, resulting in enormous time saving. But, it is quite expensive as the charges hover around Rs. 3,500 per acre, and it goes up when the demand rises.

Nevertheless, farmers rely heavily on the mechanised harvesters since the straw does not go waste and could be utilised as fodder. There are only a few mechanised harvesting machines in the district, and the rest are brought from other districts. The machines are transported to the harvesting spots on lorries.

With agricultural labourers becoming scarce, dependence on mechanised harvesters is bound to grow further in future, official sources said.

## **Divert surplus water from Mettur Dam to fill lakes, ponds: committee**

*Petition submitted to District Collector*

Demanding that the surplus water released every year from Mettur Dam be diverted to fill lakes and ponds in the district, more than 350 members of Cauvery Surplus Water Action Committee observed day-long fast near the Collectorate here on Monday.

Led by its president M. Rajarathinam, secretary M. Velan and coordinator R. Thambaiyah, members said that surplus water released through 16-vent Ellis Saddle surplus channel flow only into the sea and does not benefit anyone.

“We have been fighting for 40 years to divert the water to water bodies so that it could be used for agricultural activities,” they added.

Members said that if the Thoppaiyar water pumping scheme is implemented, Rivers Cauvery – Sarabanga – Thirumanimutharu and Vashista can be interlinked. They also demanded implementation of Thanadiyur – Moolakadu water scheme.

Members said that Cauvery water can be pumped from Mettur and taken through Konur and Kunjandiyur to reach Mecheri so as to fill water bodies. If these projects were implemented, water bodies in the district would receive water, improves groundwater level, besides helping agriculturists.

## Villages

“Many villages had submerged during the construction of Mettur Dam. But, it is painful to see surplus water flowing into the sea without benefitting anyone,” they added.

Members said that the committee was formed two years ago with the sole objective of utilising the surplus water to benefit farmers and hence, they would resort to protest until the goal is reached.

Later, they submitted a petition to Collector K. Maharabushanam.

*Petition submitted to Salem District Collector*

## “Community participation can end encroachment of waterbodies”

In what could be termed watershed thinking, farmers in the Cauvery delta districts of Thanjavur and Tiruvarur are yearning for the revival of the long-forgotten concept of *kudimaramathu* or community participation in periodic renovation and upkeep of the waterbodies and irrigation channels in their village for their own benefit.

This comes in the backdrop of Prime Minister Narendra Modi's recent stress on do-it-yourself mode rather than depend on government for all works.

Improper dredging, courtesy political interference and official apathy, coupled with mismanagement of the waterbodies allowing scope for encroachments have left the farming community fed up.

The original kudimaramathu concept was simple – all community members join in the repair and renovation of irrigation sources every year so that the village benefits as a whole.

But the so-called land reforms put paid to that concept with small and marginal farmers losing interest while big farmers had no say in the programme, leading to its effective demise, opines general secretary of the Tamil Nadu Cauvery Delta Farmers Welfare Association Mannargudi S.Ranganathan.

There was a brief attempt during the early 1990s to turn things around but the momentum could not be sustained.

The recent shabby dredging of field channels and the subsequent loss to farmers has made us think again of kudimaramathu wherein beneficiary farmers would not be cheated, Mr. Ranganathan said. The freebies culture has devoured the minds of the farmers and that must be reversed, he adds.

The renovation of irrigation channels and water sources must be entrusted to the respective panchayats and the villagers so that malpractices are prevented and that would be better achieved by embracing kudimaramathu, said secretary, Thanjavur District Cauvery Farmers Protection Sangam Swamimalai Vimalnathan. Welcoming the Prime Minister's stress on the do-it-yourself mode, Mr. Vimalanathan said that it was sad farmers were not willing to do their bit for their own cause, he said.



People's participation could effectively end encroachments that had eaten up the waterbodies. It was the responsibility of every farmer to protect his livelihood source such as irrigation channels through personal contribution by way of kudimaramathu, Mr. Vimalanathan said.

The amount spent on implementing Mahatma Gandhi National Rural Employment Guarantee Scheme could have been gainfully utilised had kudimaramathu been adopted before hand, he says.

Their views are echoed by the district vice-president of the All India Agricultural Workers' Sangam V.Jeevakumar, who said that awareness must be created among the farming community on the need for wholesome people's participation in repair and renovation of water bodies to prevent malpractices by politicians and officials.

## Farmers worried over fall in arecanut prices

*Price of 'hosarashi' variety has come down to Rs. 350 a kg*



The proposal before the State government to impose a ban on production and sale of smokeless chewing tobacco has triggered a slump in the price of arecanut in the last one week.

The price of hosarashi variety of arecanut, which was Rs. 350 a kg on November 3, has come down to Rs. 230 now. Owing to a gap

between the demand and supply, the price of arecanut had risen to Rs. 830 a kg in May this year. The gap was owing to a serious decline in the yields caused by the fruit rot disease, also known as kole roga.

With the entry of fresh produce into the market in September this year, the prices started coming down drastically. By the first week of October, the price of arecanut had stabilised and the traders bought the produce at the Shivamogga Agriculture Produce Marketing Committee (APMC) at Rs. 350 a kg.

D.M. Shankarappa, arecanut merchant at the APMC here, told *The Hindu* that arecanut prices were sensitive to policy decisions of the government.

Along with hosarashi variety, the prices of saraku, bette and api varieties had also come down by 30 per cent to 35 per cent fall in the last one week owing to the reports of a ban being imposed on sale of smokeless chewing tobacco in Karnataka, he said.

The then Union Minister for Health Harsh Vardhan had written to all the States to enforce a ban on chewing tobacco. According to sources, acting on his letter, the Department of Health and Family Welfare had prepared a Cabinet note seeking approval for the ban on the sale of loose cigarettes and smokeless chewing tobacco in Karnataka.

The issue is likely to be discussed in the next meeting of the State Cabinet. As a major chunk of the arecanut is consumed with tobacco, the arecanut merchants and farmers are apprehensive that the ban on production of smokeless and chewing tobacco might bring down the demand for arecanut as well.

K.T. Gangadhar, working president of the Karnataka Rajya Raitha Sangha, said that every year during harvest season, the large-scale arecanut traders create a panic among farmers over policy issues related to the produce. Earlier too, rumours of a possible

ban gutkha and the letter written by the Union Ministry of Health and Family Welfare to Food Standards and Safety Authority of India to examine scientific evidences on harmful effects of consuming arecanut, had triggered fluctuations in the market.

However, the prices started recovering later on. As the proposal to ban chewing arecanut has created apprehension among arecanut growers and the merchants, it was up to the government to clear these confusions and protect the interests of arecanut growers, he said.

*According to traders, prices of saraku, bette and api varieties have also come down by nearly 35 per cent*

## Rains raise hopes of good harvest

The good rains have raised the hope of increased agricultural productivity in Tuticorin district this year. The early onset of Northeast Monsoon, which accounted for a major share of annual rainfall in the district, has turned out to be a promise for farmers.

Pulses and millets were the principal rainfed crops cultivated by many farmers. The seasonal showers nearly doubled the average October rainfall of 150.7 mm to 294.6 mm this year, Joint Director of Agriculture N.K. Dhakshinamoorthy told *The Hindu* here on Sunday.

Anticipating rains, farmers had first sown maize, black gram, green gram and 'cholam', and they had sown 'cumbu' later, he said. While Kovilpatti, Pudur and Kayathar blocks experienced early showers, Vilathikulam, Ottapidaram, Pudukottai and Karungulam blocks received late showers.

Area under maize cultivation had dwindled this year due to erratic rainfall over the last two years. The district experienced a rainfall deficit of 42 per cent last year. Normally, 40,000 hectares would be covered under maize cultivation, but this year it had come down to around 25,000 ha.

To offset the shrinking maize cultivation area, many farmers had switched over to pulses and cotton, which was often referred to as 'white gold'. Cotton cultivation was expected to cover 7,000 ha from 5,000 ha at present. Cotton crop grew well in Kovilpatti, Kayathar, Pudur and in some parts of Vilathikulam and Ottapidaram blocks.

The total cultivation area of pulses was around 70,000 ha and millets 60,000 ha. With a good storage of rainwater, paddy plantation would pick up in the pishanam season in the middle of November. Water would be drawn from 53 PWD tanks. Farmers would be engaged in transplanting paddy shoots grown in nursery beds in paddy fields mostly in Srivaikuntam, Alwarthirunagari and Karungulam blocks. Paddy was expected to be raised on 17,500 ha, he added.

## First consignment of urea arrives

*Two more goods trains to be unloaded shortly; urea stock position comfortable*



RELIEF FOR FARMERS:Urea being unloaded at Tirunelveli railway junction on Monday.— Photo: A. SHAIKMOHIDEEN

Much to the relief of farmers, the first consignment of urea arrived at Tirunelveli railway junction on Monday afternoon.

The farmers were feeling the heat of urea shortage while gearing up for the 'pisanam' paddy cultivation. They had complained to Collector M. Karunakaran about sale of fertilizers at inflated prices. Since the farmers in the district have raised paddy on 62,000 hectares, pulses on 18,000 hectares, millets on 7,600 hectares, cotton on 5,000 hectares and sugarcane on 1,900 hectares, the requirement of urea for November stands at 10,300 tonnes.

After the goods train with 2,800 tonnes of urea of Rashtriya Chemicals and Fertilizers Limited (RCFL) arrived, Dr. Karunakaran ordered that the chemical nutrient be sent to all 163 Primary Agriculture Cooperative Banks (PACBs) in the district where farmers can buy a 50-kg bag for Rs. 270.

"As the total consignment is to be shared among Kanyakumari, Tirunelveli, Tuticorin, Virudhunagar and Sivaganga districts, our district will get over 900 tonnes," said Joint Director of Agriculture C. Chandrasekaran.

Even as unloading of the RCFL urea started around 5.15 p.m., another 1,350 tonnes of urea from Indian Potash Limited (IPL) arrived at Vanchi Maniyachi junction. This consignment is likely to be unloaded in Tirunelveli on Tuesday.

"Moreover, another 2,500 tonnes of urea from Krishak Bharti Cooperatives Limited (KRIBHCO) will arrive here on Friday. The farmers can expect to have a comfortable stock of urea in the PACBs," said Deputy Director of Agriculture Gajendra Pandian.

Dr. Karunakaran has warned private stockists against selling the urea at inflated prices. "Farmers should get the receipt with their name and address for each sale. If a stockist sells the fertilizer at an inflated price, he will lose his licence, and punitive legal action will be taken against him," the Collector said.



Meanwhile, a stockist from Sivaganga, who contacted this correspondent over phone, said Collectors of other districts should follow the strategy of Dr. Karunakaran. “Since unloading is going on at Tirunelveli, clearing charges of Rs. 7 per bag and transportation cost of Rs. 25 per bag will cause an additional burden to the farmers. If the Collectors of other districts follow Dr. Karunakaran’s strategy of bringing the fertilizer directly to the district concerned, the additional expenditure can be avoided,” he said.

## Farmers tie up with State to provide fox tail millet seeds

*‘Kudirai vaali’ production turns profitable in Vedasandur*

For the first time, farmers, who raise only small grains in the rain-fed areas of Vedasandur block in the district, have gone to the level of having a tie-up with the State government to supply small grain seeds.

Their efforts and team work have made ‘kudirai vaali’ (fox tail millet) production a profitable business. To strengthen bond with the government, 20 farmers at Thoppupatti have formed a cluster, named Small Millet Growers Association, to expand ‘kudirai vaali’ cultivation area to 50 acres.

“Instead of selling the gains in open market, we sell them as seeds to the government,” they said. “The cluster procures seeds at Rs.50 a kg. We pack grains in two kg and five kg bags for distribution to farmers in other parts of the State because two kg of grains are required to grow fox tail millet in one acre and five kg for one hectare,” says association president S. Appavu.

At present, the production does not meet the rising demand. “We have plans to rope in more farmers to expand cultivation area,” he adds.

“We have gained experience in supplying quality seed grains to Tamil Nadu Agricultural University, Coimbatore which, in turn, distributed them to 506 farmers in Western region. Now, our village has become a major seed production centre for ‘kudirai vaali’,” farmers say. (The cluster had harvested 1,250 kg of seeds last year and sold them to the TNAU.)

“Earlier, as individual farmers, we raised different crops in small-scale and the margin was very low. This joint venture scaled down expenditure and enhanced profit,” says R. Kamaraj, another farmer.

This drought-tolerant crop requires less water and grows even in hard terrain. Two spells of rainfalls will suffice for 90-day-old crop. Plant protection measures are almost nil and pest attack is very less, says Assistant Director Agriculture P. Suriliappan.

Besides buy-back arrangement, Agriculture Department offered seeds and inputs freely and a revolving fund of Rs.20,000 to meet expenses, says Deputy Director for Agriculture M. Thangasamy.

‘Kudirai vaali’ is used as fodder for cattle and seed for human consumption.

It is rich in fibre, protein, minerals, phosphorous, calcium and iron with less carbohydrate, says Joint Director for Agriculture N. Sampath Kumar.

## Sugarcane ryots face problem of plenty



Sugarcane field.

*Surplus production set to dictate the remunerative price, the farmers opine*

Many a time excess production, instead of proving advantageous to the farmers, works against their interests. Earlier, the glut in tomato production forced the farmers to unload their product on the roads in protest against the low market price. And this time the sugarcane farmers are likely to face similar situation though not of that scale.

The sugarcane crushing season will begin at Magi and Kamareddy in Nizamabad district and about a dozen villages in Medak located at Narayanakhed will supply cane to these factories. Farmers are anxious about the price their product would fetch as they are hoping to get at least what they were paid last year.

The decreasing 'gate price' (the price of sugar that would be sold by the factory managements within the premises to dealers) has become a serious cause for concern to the farmers. The price fell down to Rs. 2,750 per quintal from Rs. 3,300 in the past. Surplus production of sugar across the nation by the factories was stated to be the reason for this.

According to sources, the current production is 2.35 lakh tonnes of sugar while the nation required only 2.20 lakh and there was a surplus production of 15 lakh tonnes. This has become an obstacle for the farmers in securing a remunerative price.

“We do not know how to approach even the Collector for a better price. We are worried about whether we would get the same price that was offered to us by the managements in the past. This is very pertinent as the situation is not in favour of the farmers,” said Nagi Reddy, a farmer from Medak. He attributed these fears to surplus production as it may lead to lower price.

In Medak district sugarcane was cultivated in about 22,000 hectares and yield of sugarcane was expected to touch about 12 lakh tonnes. While admitting that there was surplus production across the nation, Assistant Cane Commissioner Ch. Venkata Ravi was confident that farmers would get the price they were offered last year.

### **Bittersweet dreams**

\*Sugarcane crushing season will begin at Magi and Kamareddy in Nizamabad district shortly

\*More than a dozen villages located at Narayanakhed supply sugarcane to these factories

\*The decreasing ‘gate price’ becomes a serious cause for concern to the farmers

\*Excess production set to play the spoilsport in securing remunerative price

\*Sugarcane is cultivated in about 22,000 hectares in Medak district and the yield may touch 12 lakh tonnes

\*Farmers hope to get at least the price that prevailed last year and anything less than that will spell trouble for them.

## Farmers seek long-term scheme for water storage

*Need for modernisation of channels stressed*

Farmers have called for a long-term scheme for storage of run-off water from Krishnagiri Reservoir into the intervening lakes of Penukondaapuram here in Mathur.

The run-off from Krishnagiri Reservoir has not been tapped into during times of flood alert, even as there are critical lakes in the area, say farmers of Mathur networked under the Penukondaapuram Paasanadharar Sangam.

### Watershed areas hit

According to K.M. Soundarajan, Paasana Vivasayigal Sangam, Mathur, the erstwhile practice of filling up Lake Penukondaapuram with the run-off water from Krishnagiri Reservoir has been dropped, affecting the watershed areas of Lake Penukodaapuram.

“We are issued flood alert warning ahead of heavy rainfall, but there has been no scheme to harvest the run-off water from Krishnagiri Reservoir.”

Alleging laxity on the part of the Public Works Department for the poor maintenance of the channels, farmers called for allocation of funds for tapping run-off water. According to the farmers here, Lake Penukondaapuram along with all intervening lakes between Krishnagiri Reservoir and Paambaru Dam were filled to the brim with the run-off since the 90s.

“The water from Penukondaapuram Lake was later released to Paambaru Dam, and the Lakes of Malayandahalli, Thippanur, and Athipallam. But since 2009, Penukondaapuram has not been filled,” alleges Mr. Soundarajan.



Paambaru Dam with a 240 million litre capacity should be allocated with funds for its maintenance and the intervening lakes from Krishnagiri Dam should be brought under an exclusive maintenance scheme, say farmers.

Unless a scheme is designed for modernisation of the PWD channels, water cannot be saved, says Mr. Soundarajan.

Demanding that the intervening lakes be brought under the 'system' of maintenance similar to that of the main reservoir and an annual allocation be made, farmers here say harvesting of run-off water would bail off their crops during periods of drought.

The lakes here form a critical source of irrigation directly for 10,000 acres and as groundwater replenishment for about 25,000 acres, for paddy, ragi, and other horticultural crops, including mango and plantain.

Similarly, Paambaru Dam provided critical irrigation for sugarcane in its watershed. In a bid to call attention to their demand, farmers of Mathur staged a one-day token hunger strike on Monday.

## **Decision on issuing gun licences to farmers soon**

### *Efforts to deal with human-animal conflict*

The State government is actively considering a proposal to issue gun licences to farmers in areas near forests for self and crop protection, Forest Minister Thiruvanchoor Radhakrishnan has said. There had been reports of increased human-animal conflict in such areas. This had prompted the government to think of issuing gun licences. The issue would be discussed threadbare in the next Cabinet taking a decision, Mr. Radhakrishnan said.

The Minister was inaugurating the Vanashree Forest Complex at Vidyanagar in Kasaragod on Monday.

The authorities, in recent months, had been receiving complaints of wild animal incursions into farmlands. The Wild Life Protection Act 1972 put in place restrictions on the use of arms to ward off threats from animals. The government was considering an amendment to the existing law, he said.

There was a State-wide project, costing Rs.259 crore, to erect solar-powered electric fences in such areas. The district had received Rs.40 lakh for the purpose, he said.

N.A. Nellikkunnu, MLA, presided over the function. P.B. Abdul Razak, E. Chandrasekharan, K. Kunhiraman, all MLAs; district panchayat president P.P. Shyamala Devi, Principal Chief Conservator of Forests, Social Forestry, B.S. Corrie; and District Collector P.S. Muhammed Sagir were present.

## **Govt. considers dedicated engineering wing for Fisheries Department**

*Engineers from other departments working on fisheries projects*

There is a proposal before the State government for a dedicated engineering section for the Department of Fisheries, according to V.K. Shetty, Managing Director, Karnataka Fisheries Development Corporation.

Addressing a gathering after inaugurating a ten-day training for fisheries officials on 'recent developments in engineering techniques for aqua farms' here, he said that Kerala had a separate wing of engineers attached to the department.

Mr. Shetty said that currently engineers from other government departments were implementing the projects of the Fisheries Department. A dedicated engineering wing within the department would help in the timely completion of projects, he noted.

Mr. Shetty said that deep-sea fishing had reached a stage of stagnation and inland fisheries or aqua farming was picking up now.

K.M. Shankar, Dean (Fisheries), College of Fisheries, Mangaluru said that there was a need for advanced technologies in aqua fish farming and added that harvest technology was one of them. Catching fish using nets was traditional and other harvesting devices were required to provide options in harvesting for fish farmers.

Lakshman Nandagiri, Professor, Department of Applied Mechanics and Hydraulics, National Institute of Technology – Surathkal, said that any advances in technology should ensure minimum danger to the environment. S. Varadaraju, co-ordinator of the training and an associate professor (fisheries engineering and technology), College of Fisheries, said that the training would cover topics such as selection of sites for aqua farming, design and construction of farms among others.

The participants would be informed about gadgets to be used for pumping water, equipment to be used for oxygen supply, re-use of water from aqua farms, cage farming.

He said that the selection of sites was very important for achieving profit in aqua farming. Unless the aqua farms were constructed scientifically the farmers would suffer loss, he said.

The training was being imparted under a scheme of the National Fisheries Development Board.

## Water released from dam

*For dry lands in eight villages of Uthamapalayam block*

Water has been released from Shanmuga Nadhi dam for irrigation of dry lands in eight villages of Uthamapalayam block on Monday.

Releasing water from the dam, Collector K.S. Palanisamy said that 14.47 cusecs of water had been released from the dam for irrigation. A total of 1,640 acres of dry lands will benefit. Water released from the dam will be stored in irrigation tanks to recharge groundwater and also for irrigation. Water will be released continuously from the dam to enable farmers to raise the crop. It would be beneficial to meet drinking water needs of cattle also, he added.

Farmers at Royappanpatti, Mallingapuram, Chinna Ovalapuram, Erasakkanaickanur, Kanniservaipatti, Azhagapuri, Vellaiyammalpuram and Odaipatti in Uthamapalayam block will benefit.

He also appealed to farmers to utilise water judiciously and get a bumper harvest. Water level stood at 52 feet in the dam. Farmers appealed to include two more tanks at Odaipatti and Sukkangalpatti to recharge them and irrigate 600 acres. The Collector assured to recharge these wells also. The dam has been overflowing for the past 15 days. Nine cusecs of water has been drained into the river.

Chennai - INDIA

Today's Weather

Tomorrow's Forecast



Partly Cloudy

Rain: 0

Humidity: 75

Wind: normal

Tuesday, Nov 11

Max 30°  
Min 25°  
Cloudy

Sunrise: 06:05

Sunset: 05:39

Barometer: 1011

Wednesday, Nov 12

Max 30°  
Min 24°

Extended Forecast for a week

Thursday  
Nov 13



30° | 24°

Cloudy

Friday  
Nov 14



34° | 27°

Partly Cloudy

Saturday  
Nov 15



34° | 27°

Sunny

Sunday  
Nov 16



33° | 27°

Partly Cloudy

Monday  
Nov 17



34° | 26°

Partly Cloudy



# THE HINDU BusinessLine

## Weak global demand drags soyameal exports

Buyers resort to need-based purchases



**Bangalore, November 10:** Exports of soyameal declined sharply in October on poor demand from overseas buyers, who are seen resorting to need-based purchases in a bearish market.

The export of soyameal during October 2014 was 29,690 tonnes compared with 1,94,486 tonnes in the same period a year ago, according to a statement issued by the Soyabean Processors Association of India.

On a financial year basis, exports till October in the current fiscal were 1.27 lakh tonnes (lt) compared with 10.71 lt in the same period a year ago, a 88 per cent, said Davish Jain, Chairman, SOPA. Soyameal exports have declined sharply from December 2013 onwards due to poor supply of the bean, he said.

## Country-wise breakup

Iran, the largest buyer of Indian soyameal in recent years, has purchased 25,000 tonnes during October, after a gap of almost five months. In the current financial year, so far, Iran has bought about 60,500 tonnes of Indian meal, accounting for close to half the exports during the period. In the last fiscal, Iran was the largest buyer of Indian soyameal and imported some .15 million tonnes, accounting for over 40 per cent of the country's total shipments during 2013-14. Indonesia was the second largest buyer during October at 2,589 tonnes. Japan, the second largest buyer of Indian meal last fiscal, is yet to make large purchases. So far, Japan has purchased only 297 tonnes in the current fiscal.

## Production

SOPA has pegged the domestic output of the oilseed at 10.4 million tonnes, an increase of about a tenth over last year. The increase in output is attributed to higher yield per hectare mainly in Madhya Pradesh, the largest producing State.

## Coonoor tea planter comes up with solution to cut chemical fertilisers' use

**Kolkata, November 10:** A Coonoor-based planter has come up with a pilot project proposal that can help reduce the use of chemical fertilisers by half while doubling the yield. This comes at a time when the Indian tea industry is dogged by a host of issues concerning chemical residue,

According to N Lakshmanan, Director of Golden Hill Tea Estate in the Nilgiris, the current method of broadcasting nitrogenous fertilisers (applying by hand on the surface) is wasteful and leads to soil toxicity. Water soluble fertiliser, if kept in the open, loses efficiency due to volatilisation. Also part of the nutrients are swept away by rain and irrigation. Lakshmanan says the loss is significant and can be reduced by injecting fertiliser directly at the

roots, 6-8 inches under the soil, at a suitable time when the plants are most active.

The process is easier said than done. A tea bush releases specific enzymes through its roots to collect the nutrients from soil for two hours a day. This is referred to as nitrate reductase activity (enzymes that reduce nitrate contents). Manuring can be most effective, if fertilisers are injected during that two-hour window.

Lakshmanan proposes the biotechnology department of Indian Institute of Technology (IIT), Madras, should spearhead the pilot project to determine the exact time of nitrate reductase activity of each plant.

The information will be fed into a software – to be developed by Golden Hill Tea Estate – for further use of a e logical controller, which can be programmed, that will send radio signals to activate automatic drip irrigation machines, for due injection of manure.

The planter held preliminary discussions with Israel's Netafim for drip irrigation. Texas-based National Instruments will be roped in to supply the logical controller.

## **Turmeric gains colour on demand**

**Erode, November 10:** Spot turmeric prices increased on the back of demand from upcountry on Monday.

“Turmeric growers have brought only 2,700 bags and some traders who received upcountry orders started bidding at a higher price. The rest went for a lower price according to the quality,” said RKV Ravishankar, President of the Erode Turmeric Merchants Association. Traders showed interest in buying the hybrid variety and procured all the 610 bags put up for sale.

**Salem Hybrid:** The finger variety was sold at Rs. 5,705-7,619; the root variety Rs. 4,699-6,111. Of the 507 bags that arrived, 79 were sold.

## Cardamom rules steady as demand matches supply



**Kochi, November 10:** Cardamom prices were unchanged last week at the auctions. Arrivals continued to increase, as harvesting has reached its peak and is in the third round of picking.

All the buyers were active and 90 per cent of participation was there at the auctions, an auctioneer said.

Exporters were also covering small quantities and they are estimated to have bought 40 tonnes. Quality material is arriving in good volume and that constituted high percentage of 8 mm capsules, and hence the bulk was fetching Rs. 750-800 a kg.

At the Cardamom Planters Association auction on Monday in Bodinayakannur, 52.8 tonnes of cardamom arrived and of which 51 tonnes were sold. The auction average was at Rs. 738.48/kg.

At the Sunday auction held by the Kerala Cardamom Processing and Marketing Company, arrivals were 125 tonnes against 120 tonnes the previous Sunday and the entire quantity was sold out. The maximum price was Rs. 1,003 and the minimum was Rs. 498. The auction average was up at Rs. 761 (Rs. 778) a kg the previous Sunday, PC Punnoose, General Manager, CPMC, told *BusinessLine*.

In the current season, prices have been ruling at moderate levels.

At this time last season, average prices ruled between Rs. 580 and Rs. 620, he said. The individual auction average price moved up between Rs. 730 and Rs. 780.

Supply of 8mm bold cardamom constituted 30 per cent of the lots and good colour bold capsules were fetching Rs. 950-1,000 a kg. Total arrivals during the season stood 6,134 tonnes against 7,103 tonnes during the same period last year. The sales were at 6,023 tonnes and 6,851 tonnes respectively.

The individual auction average as on November 9 was at around Rs. 760 and on the corresponding date last year was at around Rs. 583.

Prices of graded varieties ( Rs. /kg): 8mm bold 950-1,000; 7mm-8mm 800-830; 6mm-7mm 720-730; below 6 mm 650-660.

## **Fresh 'low' in Andaman Sea may help break lull in N-E monsoon**

**Thiruvananthapuram, November 10:** A fresh low-pressure area has formed over south Andaman Sea, an update by India Met Department said this afternoon. It is expected to strengthen a round and become well-marked by Tuesday.

Birth of the 'low' also meant the premature death of a persisting well-marked counterpart over west-central Bay of Bengal off the coast of Andhra Pradesh.

### **Remainder whirl**

The sea-based could not make it to the coast. Only a remainder circulation hovered higher in the atmosphere above the sea, the Met said. The parent system was done in by the lower sea-surface temperatures nearer to the coast making for cool to cooler waters.

Cool water prevents evaporation from taking place and thus cuts off moisture feed into the system. Moisture is the fuel that makes



the storm engine hum and sustains it. Also, wind shear values (sudden shifts in wind direction and strength with height) were tending to be high along the coast with a western disturbance approaching from the opposite direction.

## **Rains for TN**

These conditions may prevent the new 'low' from achieving traction as a strong weather system. Indications are that the system may seek out warmer waters along the Sri Lankan coast for a landfall.

Thus, it may avoid the Tamil Nadu-Andhra Pradesh coasts where the waters have cooled down to negative values (less than threshold temperatures of 28 deg Celsius for systems to sustain).

But these coasts may expect rain or showers over the next couple days from the outer wind bands of the incoming weather system. The Met has forecast heavy rain along the Tamil Nadu coast and progressively into the interior tomorrow and day after.

Rains may grow over south coastal Andhra Pradesh, Rayalaseema and north Tamil Nadu on Thursday and Friday. They may also extend to Karnataka and Madhya Maharashtra.

## **May break spell**

The incoming spell of rain is expected to break the lull in the North-East monsoon rains during the last week when even the Tamil Nadu Met subdivision registered a deficit of 54 per cent.

The deficit is worse with neighbours – 99 per cent in north interior Karnataka; 97 per cent in south interior Karnataka; and 87 per cent in Rayalaseema. Kerala was relatively better off with a deficit of 24 per cent.

The rest of the country didn't fare much better either with all-India deficit for the week ending on October 31 at 78 per cent. Even for the season (October 1 to November 5) for which statistics are available, the overall rain figures for the country tossed up a deficit 30 per cent.

Tamil Nadu provides an exception having recorded excess rainfall of 23 per cent. Kerala was next best with 16 per cent (classified as normal). The rest of peninsula is variously under deficit.

## Why India has lost its hold in the global oilmeals market

Accessing new market at the cost of existing ones seems to have backfired



The drastic fall in exports of oilmeals from India is an eye-opener for exporters and regulators. According to DGCIS estimates, total oilmeals export during April-September 2013 was Rs.6,084.28 crore, while shipments have halved to Rs.3,057.69 crore in the same.

Exports of oilmeals during September 2014 were down by 74 per cent compared with the same month a year ago. Such a sudden fall may affect the market and thus, it needs to be prevented.

## **Opportunistic approach**

In the calendar year 2013, India was the fifth largest exporter of soyameal with the value of shipments being \$2.86 billion, accounting for over nine per cent of the total global exports.

An unexpected growth was seen in soyameal exports last year, as EU and US imposed a sanction on trade with Iran which paved the way for Indian exporters to capture this market.

Had Indian exporters maintained the supply to other traditional market such as Japan, Thailand and Vietnam, the opportunistic behaviour to meet the demand from new segment would have been justified.

Riding on the opportunity created by sanctions imposed by the EU and US, exporters are on the verge of losing even their traditional market.

## **Losing charm**

Since Indian exporters were cashing in on the sanction imposed by EU and US, the easing of sanctions has hit exports of soyameal. Countries such as Brazil and Argentina are capturing their lost market by giving tough competition to Indian exporters in Iran. During the second quarter this year, soyameal exports to Iran plunged to \$21.8 million, 86.6 per cent lower than exports during the first quarter.

At the time of peak exports of soyameal to Iran, exporters fetched a premium in the market. Now, they may not get the same due to intense competition from Latin American countries.

## **Loss of traditional markets**

In 2011, some 59 per cent of Japan's total imports of soyameal were from India.

In the first quarter last year, India boosted its exports to Iran and in the second quarter, as a result, exports to Japan dropped to \$ 6.7 million from \$98.7 million in the first quarter. The situation turned from bad to worse when exports fell further during the first and second quarters this year.

During the second quarter of 2014, soyameal exports to Japan from India were valued at \$32,000 only. Most of the market share in Japan is now captured by China, Paraguay and the US, as negligence towards the traditional market paved the way for competing countries to make inroads.

A similar pattern of exports from India were observed in Thailand. During the second quarter last year, shipments dipped in this market and were valued at \$104,000 from \$116.7 million in the first quarter.

Indian exporters are yet to regain their position in this market as during the first two quarters this year, exports were valued at \$12.5 million and \$1.2 million respectively.

### **Way ahead**

Accessing new market at the cost of existing market may not be an effective strategy in the long run.

Looking at the situation, Indian exporters' move to encash the opportunity was a good move. However, an effective strategy would have resulted in creating sustained demand from both old markets and the new one.

To gain the trust of traditional buyers, exporters should have prioritised their needs even while having ample opportunity in other markets.

To meet the demand for new market as well as meeting demand in the existing market, exporters should have also made an attempt to procure additional quantity through imports. Also, exporters now should adopt strategies to bring back the “lost sheep” to boost exports in the traditional markets. The writer is associated with National Institute of Agriculture Marketing, Jaipur. Views are personal.

## A leg up for entrepreneurship

<b>Top campus incubators in India</b> (not ranked)
<b>SIIC, IIT-Kanpur</b> Founded In 2000 Start-ups Incubated* - <b>69</b>
<b>NSRCEL, IIM-Bangalore</b> Founded In 2002 Start -ups Incubated - <b>40</b>
<b>CIIE, IIM-Ahmedabad</b> Founded In 2002 Start-ups Incubated - <b>Over 100</b>
<b>SINE, IIT-Bombay</b> Founded In 2004 Start-ups Incubated - <b>42</b>
<b>NDBI, NID, Ahmedabad</b> Founded In 2004 Start-ups Incubated - <b>21</b>

\*Includes graduated and present Incubatees  
Source: official websites

In two years, the Startup Village in Kochi has spawned hundreds of budding entrepreneurs. But challenges remain, says KPM Basheer

As a computer science student, Rohildev had been interested in the human-machine interface. So, in January 2012 when the soon-to-be-launched Startup Village, Kochi, invited him to an ‘open

coffee' event, he grabbed the opportunity. At the event, Rohildev discussed his idea of controlling a computer's operations using hand gestures.

After the session, Sijo Kuruvilla, the then Chief Executive Officer of Startup Village, suggested that Rohildev become a part of Startup Village and work on his idea. Three months later and fresh out of engineering college, Rohildev was sitting at his own desk in the village.

"It was an exciting place," Rohildev recalls. "We had free, unlimited, high-speed internet, and gadgets and apps that we could make use of any time." The village was open 24 hours . And when he decided to launch his own venture — Fin Robotics — help was around to get the company registered and to handle legal and administrative issues.

"Through the excellent network of contacts at Startup Village, start-ups can access a whole set of services, including funding and product developers. Almost all the services were free," Rohildev says. (Now Startup Village charges a monthly fee of Rs. 1,000 for a 'seat'.)

Less than two years later, in 2013, Rohildev came out with the prototype of 'Fin', a ring-like device that controls smart gadgets. When the product won recognition, Rohildev raised Rs. 1.2 crore on the international crowd-funding platform indigogo.com. A few months back, Fin Robotics moved out of the Startup Village building when the team expanded . "But for Startup Village, I would perhaps not have developed 'Fin' and set up Fin Robotics," the 25-year-old CEO says. He plans to market his product from May 2015. "It was exactly for helping young people like Rohildev to follow their dreams and usher in an entrepreneurial mindset in Kerala's new generation that Startup Village was created," says Pranav Kumar Suresh, the current CEO of Startup Village.

### **First incubator**

Set up in 2012 and housed in the Kinfra High-Tech Park on the outskirts of Kochi, Startup Village is a technology business incubator and is the first in India in the private-public-partnership (PPP) mould. It brought together the Kerala Government, the Central government's Department of Science and Technology,



Thiruvananthapuram's Technopark; and MobME Wireless, the country's first campus start-up. Currently, about 50 start-ups are housed in the Village. Nearly 500 more are "virtually incubated" as space is limited. Most are internet, telecom and electronics outfits, with a few also specialising in gaming and robotics. "The Village aims to create a vibrant start-up ecosystem and entrepreneurial culture in Kerala and encourage young people to set up their own business ventures," says Infosys co-founder Kris Gopalakrishnan, who is also the Chief Mentor of the Village. "We hope to see a billion-dollar company emerge from a campus start-up in Kerala in the next ten years," he added.

### **Creating an ecosystem**

Though technology incubators host start-ups for a maximum of three years, at Startup Village, a product start-up can stay for five years. The infrastructure at Startup Village, which presently operates out of a 20,000 sq. feet building, is getting a boost. Within a year, it will get an additional one lakh sq ft of work space at the Technology Innovation Zone in the Kinfra Park. CEO Suresh points out that this would help the village incubate 250 more start-ups. "We aimed to incubate 1,000 in ten years, but see, in just under three years we have more than 500 waiting to move in," he said. Space is just one part of the ecosystem. "It's the networking rather than the infrastructure at the village that helps a young entrepreneur like me the most," says Jibin Jose. He had started visiting the Village during weekends in his second year at college. "You get tips on solutions to problems you face — be it marketing, finance or government-related issues," says Jose, now the co-founder and CEO of Flip Technologies. The start-up has developed a smartphone app that provides diagnostics for skateboarding.

Jose got a networking opportunity this year when he was selected for a mentoring programme in Canada. Last year, the Village had sent him and four other entrepreneurs to Silicon Valley.

As majority of the entrepreneurs are either students or those just out of college, unaware of the basics of running a firm, mentoring takes several forms at the village. For instance, when start-up Mashinga needed help to design its touch-screen table,

Gopalakrishnan put the company in touch with a hardware designer associated with Infosys. In a monthly community event, experts from outside give tips to budding entrepreneurs. When it comes to specific issues, the entrepreneurs can access Startup Village's network of partners, such as KPMG and net4, who offer services such as accounting and web hosting at a subsidised rate. As the Village has a limited source of funds, it uses this network to help start-ups raise money. Financial institutions and investors have provided loans to 20 start-ups. And two of them (MindHelix Technologies and SectorQube Technologies) raised money on the Kickstarter global crowd-funding platform. "The Startup Village is a unique incubator in that here companies can go from idea to initial public offering," points out Sanjay Vijayakumar, chairman of the board of governors of Startup Village.

### **Seeking self-sustenance**

But is Startup Village a sustainable entity? "Frankly, we don't know," says Suresh. "It is just 28 months old and in many ways Startup Village itself is a start-up. We are a not-for-profit organisation, but we want to stand on our own financially," he adds.

At present, the infrastructure is provided by State government agencies and expenses are met from the five-year, Rs. 2.5 crore-grant from the Department of Science and Technology. MobME Wireless has so far raised Rs. 4 crore and Gopakrishnan gives an annual grant. "Finding a sustainable revenue stream is our biggest challenge now," says Suresh. Despite the challenges, Startup Village has had an impact. That was visible at the Young Entrepreneur Summit organised on September 12. Against the expected turnout of 2,000, more than 4,000 students gathered at the summit. To inspire more campus entrepreneurs, the government gives students creating start-ups a 20 per cent concession on attendance and 4 per cent 'grace' marks in exams. And the attitude is changing. "The risk-averse middle-class families, which are keen on their children getting secure jobs, now do not say an outright no if their sons or daughters want go into business," says Jose.

## **American Tower keen to develop 'villages of the future'**

New Delhi, November 10:

**Everyone is now thinking about taking affordable Internet services to the next billion. From a tower company's point of view, how do you plan to overcome the challenges around costs?**

We are developing a concept called the 'villages of the future' for reaching mobile Internet to the village population. It has to be crafted carefully because of the cost issues. Mobile operators have to fund all this and that mean suppliers like us need to bring down the costs as much as possible. We believe this has to be a collaborative approach where the industry can work to bring costs low so that return on investment for operators is efficient which in turn enables rural users to get affordable services.

**What are the building blocks for this village of the future plan?**

One way to do is to share tower infrastructure. It's easy to build one tower and multiple operators can share it. Fortunately, in India, the model is already here. We also need to help operators with backhaul connectivity. In the US, backhaul is most expensive because you need so much bandwidth to connect the tower. In India, the Government is working on the national optical fibre and we can work with the Government to plan for this, in terms of identifying sites to be connected. The other thing you need is electricity. Tower transmission should be given first priority to get grid connections. Another concept that we have explored in some countries along with energy companies is to set up 1 MW power station at villages to substitute for the grid. The tower can become the anchor tenant and then the excess power can be distributed to the villages around it.

**Have you started discussions on this?**

We have started discussions and some big power companies are interested. We have started some kiosks of our own in India. But to scale it up, it's going to take some leadership on the telecom operators' part as they may not make money from day one. That's

where the Government should step in to build the ecosystem. Governments' delivery services should be available wherever there's a tower. For example, banks can put their ATMs in the premise where towers are located. The Common Service Centres can be located here.

**Companies like Facebook and Google are experimenting with solar powered drones and balloons to address affordability. Do you see these as disruptive to your business?**

The tower is the most efficient means to deliver Internet services. It's hard to imagine how these solutions will be cost effective. The benefit, however, is that traditional telcos may not be creative so it's great to have these companies from silicon valleys throwing rocks.

**How do you see India on ATC's global plans?**

Our view is that the regulatory environment is improving in India; the global economy is improving and the cost of handset is coming down so we are re-engaged in evaluating further investments in India. We have access to capital. It's a matter of finding the right asset at rice price.

**You have 12,500 towers in India. What's the target for the next year?**

We don't have numerical target for any market. We are happy with our growth here, and in fact, the India operation is punching above its weight. We are putting in 1,500 new sites in India a year, which is the biggest build plan in any single country across our operations. We would like to expand and get more assets, but it has to meet our investment criteria.

**Are you in talks with any Indian players for an acquisition?**

We are constantly evaluating opportunities, but we have a global acquisition map and are looking at assets in Africa and also in the US.

## Are there any regulatory concerns in India?

In India, there is still no clarity on licensing on infrastructure companies. In all our operations in other countries, India is the only place which is talking about taxing tower companies. If the licence fee comes, then all our investment models will go to the negative.

## Green shoots in Rajasthan



Leading the water charge Govardhan with Atul Rishi, chief executive of PHD Rural Development Foundation Rasheeda Bhagat

Radical changes in agriculture are transforming lives and lifestyles in once-arid villages

A visit last week to a cluster of villages in the Sikar and Alwar districts of Rajasthan, where over 50 check dams have been constructed in the last few years to dramatically alter the lives and livelihoods of Rajasthan's farmers, was an education, an entertainment and a positive account of Indian agriculture... all rolled into one. Barely 10 years ago, these villages, within 80-90 km of Jaipur, were defined by parched land and farming totally dependant on the vagaries of the monsoon, allowing only one crop of bajra and some other millets.



This is also the region where Magsaysay Award-winner Rajendra Singh ushered in a water harvesting revolution through check dams. Govardhan, 65, had worked with him for 16 years before teaming up with the PHD Rural Development Foundation and Rotary India to build check dams to prevent rainwater run-off and dramatically improve water tables in these villages.

## Land transformed

Govardhan's 60 *bighas* of land (20 *bighas* make an acre) are collectively owned by him and his five brothers. While the soft-spoken Govardhan talks about farmers now harvesting three crops a year, including wheat and one cash crop, his flashy nephew Banwari, 33, fills me in on farmers' changing lifestyles, and their children in better schools, before rounding off the discussion with a mouth-watering account of his fondness for food.

Govardhan recalls that 10 years ago when he came from Alwar to Guwaravyas, an interior village about 65 km from Jaipur, where he has now built a comfortable house with toilets, "the water situation was terrible. At 800 feet, they could find just enough water for drinking. Things were so bad that the men were migrating to Delhi, Bombay to work as porters, tile-layers, etc".

But today, with seven check dams built around his and surrounding villages, the harvested water has filled up their wells and even though the monsoon has failed this year, there is enough water in the wells and in two of the bigger dams to see them comfortably through two years of good farming.

"Farmers are now selling *bhindi* (okra) worth Rs. 50,000 and *tinda* (a type of gourd) worth Rs. 1 lakh. Migration has been reversed and men have returned from the cities to work on their own land," says Govardhan. "Forget human beings; we are greedy anyway. Today there is copious water for animals and birds and plants and trees too, as you can see from the greenery around," he adds.



“ *Bhindi* was never seen in this part of Rajasthan; we now grow tomatoes, green chillies and other vegetables and will plant sugarcane in four *bigha* this year,” beams Banwari. He was one of the first this year to harvest his bhindi crop and sold a part of it at Rs. 58 a kg. Later, as more farmers harvested their okra crop, the price fell to Rs. 8 a kg. “But I had made my money,” he grins.

## Enter tractors

The farmers gathered at Govardhan’s home where we were treated to a delicious lunch of hot *makki ki roti* with lots of ghee, *methi* and potato *sabzi*, *kadhi*, *pooris*, and lassi, have all built *pucca* homes with toilets “which were earlier unheard of in our villages”. Some of the farmers have built not one but three homes. Malliram, 60, is one such. All his five sons who had migrated to the cities over the last 10 years have returned, and last year he bought a tractor for Rs. 5 lakh. A man of few words, he sums up his status in one sentence: “ *Khoob pani, khoob anaj, khoob paisa* (We have lots of water, lots of foodgrain and lots of money).”

But Banwari loves to talk. As he drives with me through some of the villages, he points to the *kikar* trees that grow wild on uncultivable land. Kikar grows within 8 to 10 years, and each tree can fetch up to Rs.15,000 for its wood used for both furniture and cremation. “With 10 kikar trees, you can comfortably rear 10 goats and 2 camels on the fodder it provides.”

He then points to aloe vera which grows wild in this region. “We use it for fencing and also for our food, as it has several medicinal properties. My father has joint pain and we give aloe vera juice to him, and also make our wheat *atta* (dough) with it. So our rotis or baati (a Rajasthan staple roll made of wheat flour) have aloe vera juice. Do you know pimples disappear if you rub a piece of it on your face?” Banwari then goes on to explain how all the facial creams sold overseas have aloe vera and ointments sold by Baba Ramdev contain “both tulasi and aloe vera.”

## No nasha, just food

In another village, he points to fields growing tobacco which “sells at Rs. 100 a kg now as in big hotels they offer sheesha/hukkah. So the price of tobacco, which was earlier Rs. 30-40 a kg has shot up. *Hamesha bekar cheez ki value jyada hoti hai* (Useless things are always more expensive).”

As he waxes eloquent on how the sale of *sharab* (liquor) is propping up the Indian economy, and the economics of applying for *sharab ke thekey* (liquor shops) I ask him what his favourite poison is.

“I don’t believe in *nasha* (intoxication) of any kind. I don’t even drink tea; I drink milk and lassi and must have *mithai* (sweets) after every meal. Even in hot *makki ki roti*, *ghee chopad ke* (smeared with ghee), I mix powdered jaggery and consume it. And for morning *kaleva* (breakfast) we make *makki ki rabri* and eat it with milk or *dahi*. If you eat all this you will not get any disease and not age fast either.”

But then you have to burn it all, the way he and other farmers do in their fields. “Yes, today there is good money in farming, but we have to put in hard labour. We can get such profits only because our entire families work in the fields during sowing, harvesting,” says the young man.

So how far has he studied? “Oh, I have a double MA in history and political science from Rajasthan University. After building check dams I’ve got a diploma in water conservation from IGNOU. *Sochta hoon ke ab social work mein PhD kar loon* (I’m thinking of a PhD in social work),” he adds, casually.