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Increase the area under cultivation of pulses, delta farmers told

Delta farmers can go in for good varieties of black gram: Duraikannu



ENCOURAGING ALTERNATIVE CROPS: Agriculture Minister R. Duraikannu giving away assistance papers to a farmer in Melattur near Thanjavur on Sunday. With him are (from right) K. Ramasamy, Vice Chancellor of Tamil Nadu Agriculture University, Collector N. Subbaiyan, and Mayiladuthurai MP R.K. Bharathi Mohan.— PHOTO: R.M. RAJA RATHINAM

Farmers need to make an effort to increase the area under cultivation for pulses and its productivity using multi-pronged strategy to achieve targets, Agriculture Minister R. Duraikannu said at Melattur near here on Sunday.

Participating in a Pulses Field Day and Kuruvai Package 2016 popularisation programme organised jointly by the Department of Agriculture and the Tamil Nadu Agriculture University at Melattur, Mr. Duraikannu said the country had achieved five times higher foodgrains production, nine times higher horticulture production, 13 times higher fish production, eight fold improvement in milk production, and 39 fold increase in egg production. “But we have lagged to a great extent in pulses production,” he said.

The Minister underlined that the United Nations Food and Agriculture Organisation had declared 2016 as the year of pulses to popularise the virtues of

pulses and its essential role in maintaining the health of people. In line with that, farmers need to adopt recent technologies, mechanised farming options, choose appropriate seed varieties, water management, integrated pest management, weed management, nutrition management, and above all concerted attention to the crop to achieve increased productivity in pulses crops, Mr. Duraikannu said.

In particular, the delta farmers could go in for good varieties of black gram for raising that as a cash crop with low input cost and high returns. Delta farmers could make use of the State Government's kuruvai package to raise paddy in areas where sub surface water could be tapped, he said.

Farmers in Thanjavur, Tiruvarur, Nagapattinam, Ariyalur, Cuddalore, and Tiruchi stand to benefit from the Kuruvai package for which the State Government has sanctioned Rs. 54.65 crore, he added.

District Collector N. Subbaiyan presided over the programme in which Mayiladuthurai MP R.K. Bharathi Mohan, Pulses Special Committee Member P.N. Vedanarayanan, Kumbakonam Sub Collector M. Govinda Rao, Vice-Chancellor of the TNAU K. Ramasamy, and Joint Director of Agriculture (in charge) Srinivasan participated.

Farmers unaware of features of crop insurance: Minister



Pon. Radhakrishnan, Minister of State for Road Transport, Highways and Shipping, addressing a programme at Gandhigram Rural Institute near Dindigul on Sunday.— PHOTO: G. Karthikeyan.

In the last 18 months, the Narendra Modi government had devised very many number of welfare schemes exclusively for farm workers, said Union Minister Pon Radhakrishnan here on Sunday.

Speaking at the inaugural function of crop insurance awareness programme for farmers at the Gandhigram Rural Institute organised by the Indian Council for Agricultural Research, he said that the schemes were expected to enhance the earnings of small and marginal farmers in the country that in the next five years it would go up phenomenally.

The Union government would not confine by just giving assistance, but provide infrastructure, which would improve the standards of living of farmers. Naming a few of the projects, Mr. Radhakrishnan said that by giving adequate support to farmers at the times of crises, they would come forward to carry on with agriculture. This was the first step to stop migration from villages. Many farmers were unaware of the features of the crop insurance. Through such camps, he hoped the ryots would be educated.

The “Prime Minister's Fasal Yojana” is being launched from this kharif season for which the Union government had entered into an agreement with the State governments.

The premium to be paid under the scheme was paltry that it would benefit a large number of policy holders. The financial burden of the States would also be shared by the Centre.

For the first time in the country, with the aid of mobile phones and satellite, the extent of crop damage had been gauged and compensation provided for the farmers.

‘Issuance of soil health cards to all farmers will be completed by March 2017’

Farmers in the district have complained about what they termed as partial distribution of soil health cards, a three-year scheme initiated in 2014 by the Central Government under Mission-mode approach from the Agriculture Department.

The Agriculture Department initiated the soil sample collection during 2014 under three phases in the revenue villages, and has, so far, completed 50 per cent of the task, involving Village Administrative Officers. Along with Assistant Agricultural Officers, VAOs also underwent training.

According to the Nodal Officer of Mission on Soil health Card R. Savithiri, who is also the Assistant Director of Agriculture in Bhavani Block, it was not possible for the Department to issue soil health cards individually since the scheme envisages determining the soil quality in units of grids, one sample per five acres of wet land and 12.5 acres of rainfed fields.

“A majority of farmers have small land holdings and hence, it was practical for the department to choose the sample of only one small land holding that is a part of grid,” Ms. Savithri explained.

Farmers in common grids have been instructed to share the findings of soil health, she said, adding that, to fulfil the farmers’ demands, multiple cards were now being generated for every grid for distribution through Agricultural Extension Centres.

Samples

The Department has, so far, analysed samples of 50 per cent of the targeted area of 42,000 hectares, for physical and chemical properties, and has recommended site-specific and crop-specific nutrient management through balanced use of chemical fertilizer along with bio-fertilizers and locally available organic manures to maintain soil health and crop productivity.

As for the remaining 50 per cent area, the samples have been collected, and the task of testing soil with geo-tagging, and specifying latitude and longitude and survey number for easier location, will be carried out before December-end.

In all likelihood, issuance of soil health cards to all farmers in the targeted area will be completed by March 2017, Ms. Savithri said.

Farm operations pick up in Prakasam

District receives excess rainfall in June; officials predict more coverage under kharif

Farm operations picked up momentum as Prakasam district received excess rainfall in June.

Bringing cheers to the farming community, weather officials predicted more rain under the influence of the low pressure area over Bay of Bengal. The weather system is likely to become well marked low pressure area during the next 24 hours.

Santamagaluru recorded 28 mm rainfall followed by Martur 16.2 mm and Ballikurava 10.4 mm.

Farmers completed sowing operation in 20,000 hectares taking advantage of the district receiving an average rainfall of 84.9 mm during June as against the normal rainfall of 58 mm, Agriculture Joint Director J. Muralikrishna told *The Hindu* .

Polycropping

With weather officials predicting 106 per cent rainfall, the crop coverage is expected to cross the normal extent of 2.35 lakh hectare during the kharif season.

“We are asking the farmers to go for polycropping to achieve double digit growth target,” he said.

Farmers have so far grown, among other crops, sesame (8,000 hectares), green gram (5,000 ha), green manure (5,000 ha), cotton (1,600 ha) and red gram (1,000 ha). The department expected the red gram coverage to go up to 90,000 hectares this year as against 76,000 hectares last year.

The king of fruits sets sail



The consignment is likely to reach New York port in 22 days. File photo: C.V. Subrahmanyam

For the first time, 18 tonnes of Banganapalli, Kesar and Alphonso mangoes started a voyage to the United States on Friday by sea, from the Jawaharlal Nehru Port Trust here. The consignment is likely to reach New York port in 22 days from where it will be distributed.

Mangoes were earlier shipped only by air to America, stunting exports. Government officials and traders see the sea route as a potential game changer. The consignment is likely to reach New York port in 22 days from where it will be distributed.

Mango exports to the U.S. have been restricted to the air-route as the fruit ripens rapidly once harvested. Following the strict norms imposed by the U.S. on import of the fruit, shipments need to undergo irradiation, which kills pathogens and other bacteria.

Fifty-two per cent of the world's mango production is in India. However, official figures indicate that only 2 per cent is exported. This year, around 175 tonnes of mangoes were exported to the US by air. But that was more expensive compared to exports to other countries. The sea route is seen as offering better returns and is capable of handling more mangoes.

Less than half

“A box of 3.5 kgs costs around \$18 if sent via airplane. The sea route costs \$8. We are keeping our fingers crossed as never before have mangoes reached a U.S. port in edible condition via sea. If we succeed, it will open up a huge market,” said Pankaj Gathani, Group CMD, Mukund Export.

The consignment was shipped in atmosphere controlled containers. As per U.S. law, chemicals or silica pouches cannot be used to control ripening. The containers are meant to slow down the ripening process. “We have also tried to cut the time between harvesting and shipping. We understand that it is a total risk, but we are hopeful,” he said, adding that insurance cover for exports would help greatly.

One of the key pre-export procedures for fruit sent to the US is irradiation. Apart from Lasalgaon (in Nasik) and Bhabha Atomic Research Centre, a new irradiation centre opened at Navi Mumbai on April 15.

“This is extremely useful for exports. The government is hopeful that the consignment will reach the U.S. port without much ripening or decay,” said Prashant Waghmare, Assistant General Manager, Agricultural and Processed Food Products Export Development Authority.

“Opening as many markets as possible is absolutely essential for mango producers and traders. We hope this sea route experiment becomes a success.

Farmers will benefit,” said Vivek Bhide, President, Konkan Cooperative Association of Alphonso Mango Growers and Sellers. Mr. Bhide said traders’ margins would rise, and the benefits should be shared equally with farmers.

Gujarat farmers vow to protect their land

Residents of over 104 villages in five talukas — Olpad, Choryasi, Makrej, Palsana and Mangrol — in Surat district, South Gujarat, are up in arms against the move to bring their villages under the Surat Urban Development Authority (SUDA), which is preparing a master development plan 2035.

The government has proposed an industrial corridor and townships because these villages are in the periphery of the Diamond city, Surat, whose population is likely to touch 11 million by 2035, from 4.5 million according to the 2011 census.

However, the villagers, mostly farmers, fear that they would lose their farmlands if the villages are brought under the purview of the local urban development authority.

Highly fertile lands

“More than one lakh hectares of agriculture land in these 104 villages is being sought to be appropriated by the authorities. This land is highly fertile and we cultivate 2-3 crops like paddy, vegetables, sugarcane and banana,” said Jayesh Patel, a local resident and activist of the Gujarat Farmers’ Society.

The farmers have challenged the government’s move in the High Court, which is slated to take up the petition for hearing on Monday.

“The notification was issued without either consulting the local panchayat members or even elected representatives of the area. Villagers are not ready to give up their fertile lands for an industrial corridor,” said a BJP lawmaker who did not want to be named.

According to sources, the government wants to create a new industrial corridor to shift the existing small industrial units located within the city. “Some politically connected builders in connivance with a section of local politicians and bureaucrats have come up with this idea,” said a senior bureaucrat who had earlier served in Surat.

They have challenged move to bring their villages under Surat Urban Development Authority

Farmers asked to use pesticides with care

As part of implementing the government policy on farming, the farmers should take care to control the use of chemical pesticides and fertilisers, District Principal Agriculture Officer has said.

The farmers could use the plant health/ agro-clinics and the pest services system to turn to organic farming. He said the outlets should sell chemical pesticides to the farmers only on the prescription of the Agriculture Officers. Legal action would be taken against those found selling banned pesticides to the farmers. If it was noticed that banned pesticides were supplied to the farmers by the outlets, it should be informed to the Krishi Bhavan office or the Principal Agriculture Officer.

At millets expo, visitors told to watch out for diabetes



Well begun: The expo, organised by the Karnataka Farmers' Market, was inaugurated on Sunday by the former Assembly Speaker, Krishna (right), in Mysuru on Sunday.— Photo: m.a. sriram

A two-day exhibition-cum-sale of millets and other agricultural products that could ward off diabetes is under way at Nanjaraja Bahadur Choultry in the city.

The expo, organised by the Karnataka Farmers' Market, was inaugurated on Sunday by former Legislative Assembly Speaker Krishna, who urged the public to keep diabetes at bay by consuming unpolished millets. He said polished rice and millets tend to dilute their therapeutic value and effectiveness against diabetes.

On display at the expo are a variety of millets, including Foxtail, Browntop, Barnyard, etc. Besides the sale of millets, there were also talks on food and health on Sunday. On Monday, a panel discussion on 'Millets, dry land agriculture, processing and marketing' will be held at 10.30 a.m.

There will be a talk on tips for natural health at 3 p.m. and another on environment and health at 6 p.m.

Renewable energy initiative set to become a reality

An ambitious renewable energy initiative, envisaging tapping of solar power to irrigate the agriculture fields of tribal farmers in five remote habitations under Bangaru Chelka and Mylaram gram panchayats in Kothagudem mandal, is set to become a reality soon.

The initiative assumes immense significance for the tribal farmers in the two gram panchayats as the project is expected to ensure power supply to their agriculture fields in a cost-effective and eco-friendly manner.

The renewable energy based project was conceived by the government agencies concerned at an estimated cost of Rs 1.23 crore in the backdrop of the difficulties involved in providing three-phase electricity supply to the agriculture fields in the remote tribal habitations in the conventional mode.

The project is expected to render concrete benefit to more than 250 tribal farmers in the two gram panchayats. Of the 90 borewells proposed under the project, around 80 borewells have already been drilled under the aegis of the District Water Management Agency (DWMA), sources said.

Kothagudem MLA Jalagam Venkat Rao has reviewed the progress of the drilling works with the officials concerned recently. With the drilling works reaching the final stage, the government agencies concerned have expedited the process of procuring the solar powered pumpsets in adherence to the stipulated norms, sources added.

According to sources, the solar powered pumpsets are likely to be installed under the aegis of the Telangana New and Renewable Energy Development Corporation soon.

The project is expected to render concrete benefit to 250 tribal farmers in two gram panchayats

e-Seva centres need infra boost

While the number of people using e- *Seva* centres or Common Service Centres (CSCs) in Madurai district is witnessing considerable increase, concerns have been raised about inadequacies in the infrastructure of these centres in catering to the increasing demand.

According to Tamil Nadu e-Governance Agency (TNeGA) website, there are more than 300 centres operating in Madurai, run mainly by Tamil Nadu Arasu Cable TV Corporation (TACTV) and Primary Agricultural Cooperative Credit Societies (PACCS).

Pointing out that about 50 to 100 centres were highly utilised, officials acknowledged that a majority of the centres, particularly those operated by TACTV, did not even have UPS (Uninterruptible Power Supply) units for the computers.

“Whenever power goes off, the computer also goes off and we need to start afresh once power is restored. It causes a lot of delay,” said an employee working in one of the CSCs.

Another employee pointed out that printers had also become a problem often.

“Once a toner cartridge runs out, a request needs to be raised and it takes a day or two to get it replaced. Having a backup will avoid delays,” another employee said.

Chaos prevailed in two CSCs located in Madurai Collectorate a few days back as a large number of people had gathered, mainly for obtaining Aadhaar cards.

“Since ration shops ask for plastic Aadhaar cards, which are provided in the TACTV-run e-Seva centres, we come here. However, the employees say they can print only 30-40 cards a day,” alleged, M. Thirukumaran from BB Kulam.

Employees at the centre also blamed the capacity of the servers for occasional delays.

“CSCs from across the State access the servers located in Chennai. The servers face performance issues, particularly during peak seasons like school and college admissions, when many people apply for certificates,” an employee said.

UPS backup

Ruling out server capacity and printers to be issues, Collector K. Veera Raghava Rao said that the district administration was taking steps to ensure UPS backup in all the CSCs.

Dairy farmers find the going tough

Dairy farming, which has been proposed and encouraged on an extensive basis in the district as an alternative livelihood for the drought-ridden farmers is fast losing its charm among the farmers, if the recent agitations by them are any indication.

In all, more than 35,000 farmers are involved in commercial dairy farming of which close to 10,000 sell their milk to the Andhra Pradesh Dairy Development Cooperative Federation (APDDCF).

The Federation has been procuring around 50,000 litres (50 kl) of milk during the lean season and a little over that during the peak season, having a pasteurising capacity of 50 kl per day.

Besides the APDDCF which is obligated to buy all the milk brought to it by the farmers, the private sector dairies buy around 80 kl per day from the farmers while private milk vendors who cater directly to individual houses — comprising primarily buffalo milk — buy around 120 kl per day.

The Centre and the State government, which thought of dairy farming as an alternative and dependable source of livelihood for the farmers, encouraged the same through extensive bank linkages and subsidies from Nabard, indeed increasing the earnings of quite a few farmers.

However, post bifurcation, dairy farmers, especially those attached to the Federation are a disgruntled lot as it has reduced the quantity of milk it purchases. It has also not been paying the farmers promptly.

“The government hasn’t released funds to process payments of the farmers. Yes, payments for all the farmers are pending for a period of almost three fortnights. Our hands are tied,” said a senior officer of the Federation, speaking *The Hindu* on condition of anonymity.

Speaking to *The Hindu*, Deputy Director of the APDDCF at Anantapur Nageswara Rao said milk to the tune of 35 to 40 kl was used to be sent to the plant at Hyderabad earlier.

Now it was being shifted to a conversion plant at Ongole where the milk was being converted into milk powder and butter.

“I don’t have an option to even go back to cultivating groundnut as I have converted my land into growing grass for the animals. Now this is my only livelihood. If they don’t pay, I don’t know what else to do,” said Narayana Reddy, a dairy farmer of the Raptadu mandal, even as the government is yet to come up with an alternative plan to mitigate the situation.

Meanwhile, the dairy farmers are up in arms against the ‘careless’ attitude of the officials who seem to be hardly bothered about the travails of the dairy farmers.

When life gives you tomatoes



Labourers sort through tomatoes on a farm in Narayangaon, and (below) a tomato affected by the ‘tiranga’ syndrome (discoloration of the fruit) that made it unfit for consumption. Photos: File picture Reuters & Rahi Gaikwad

With crops hit by drought and the TO-1057 seed, our reporter visits Narayangaon, among the country’s largest tomato growing regions, and finds farmers struggling to cope with the failed harvest but still faithful to the fruit

ast week, the grey rain clouds over the Sahyadris seemed full of promise. A few light showers, and colour was slowly returning to parched leaves and the dry earth was beginning to yield again. In Narayangaon village in Pune district of Maharashtra — one of the main tomato-growing regions in India — the monsoon, however, is yet to wash out the damage wrought by the drought in the wake of one of the harshest summers the region has experienced.

As tomato prices soared to Rs. 100 a kilo last week, the few tomatoes left in the refrigerator suddenly became prized possessions. A massive shortage of this kitchen staple has led to spiralling prices, hitting the profits of traders, and rendering helpless the usually prosperous tomato grower to an extent where even recovering costs has become impossible.

Tomato farmer Subhash Bhor's crestfallen countenance reflects the state of his orchard — a four-acre mess of wilted leaves and shrivelled tomatoes sagging from the stems. One of the reasons for such large-scale damage, he says, is the TO-1057 variety of seed from Swiss seed company Syngenta. "This is the first time I have used this seed and the first time I have experienced such a heavy loss in the last 20 years. I started sowing last December, but in February, there was a virus attack. The tomatoes were infected with *tiranga* (tospovirus), and the fruit turned yellow, pink and cottony inside," he says.

Bhor lost Rs. 5 lakh. This is the story of several farmers in Junnar taluka, where Narayangaon is located, and the adjoining Ambegaon taluka. "I borrowed money against my house and jewellery. Every day, I get calls asking for repayment. The tractor services have to be paid. The whole year's income depends on the tomato crop," he says.

Every season, Bhor sows the tomato seed and layers the earth with mulching paper, to preserve moisture. The stems are then propped up on bamboo sticks and the saplings tied with twine to ease growth. 'Miracle' paper is used to keep away insects and pests and drip irrigation is used to water the plants. Other expenses go towards chemical and organic fertilisers, medicine drops, and labour and electricity. Despite all the effort, Bhor reaped a field of diseased crop this year. .

"Every year, I produce nearly 7,000 crates of tomatoes [one crate contains 20 kg]. I have never experienced such loss," he rues.

With no compensation in sight, his mother, in a desperate attempt, wrote to the local police threatening suicide if action was not taken against the Swiss seed company. Farmer suicides are not as common in western Maharashtra as they are in the more neglected, poorly-irrigated and drought-ridden Marathwada and Vidarbha. Located close to Yedgaon dam, Narayangaon is well irrigated.

"The farmer here is so prosperous," points out Deepak Bhise, tomato grower and president of the Tomato Seva Sangh, Junnar taluka, "that he/ she has never had to appeal to the government for compensation. We don't have public transport in the village simply because we don't need it. Everybody here owns a vehicle."

The drought has dealt a blow to their fortunes and dashed their confidence.

In the office of Shriram Gadhave, president of All India Vegetable Growers Association, a bulky document carries an endless list of names and complaints of farmers who lost their yields to TO-1057. Gadhave estimates that “85 per cent of flowers were burnt in a heat wave from April 5 to May 15, and almost 99 per cent of standing crops under TO-1057 was damaged.”

All through the summer, the farmers fought. Their delegations met officials, who came and inspected the damage. They wrote memorandums, staged protests, pulled strings, organised a fast, even demanded criminal action against Syngenta. All to no avail.

An official survey in Junnar and Ambegaon talukas on April 6, 2016 found 100 per cent crop damage in the fields surveyed. The team found TO-1057 crops greatly infected by disease. Based on this report, Maharashtra banned the seed. Compensation will be dealt with by the State consumer forum, said K.V. Deshmukh, Director, Agriculture (extension and training with additional charge of input and quality control).

As per official estimates, the tomato crop of 3,092 farmers in 183 villages, spread over 1,339.46 acres in Junnar and Ambegaon where TO-1057 seeds were used, was found affected by disease. A healthy tomato plant can grow as high as a person. Unusually high temperatures made vast tracts vulnerable to pests, primarily the whitefly. “Climate change has increased the population of the whitefly. It was a minor pest; now it is a major pest,” explains Gadhave.

“Any amount of pesticide can’t eradicate the whitefly. We are afraid there won’t be a tomato crop next year,” says Devidas Bhor, farmer and sarpanch of Yedgaon village. The TO-1057 summer variety is designed for temperatures between 38 and 40 degrees Celsius. “It touched 43 degrees; you can’t do anything.” The traders still swear by TO-1057. “It is the No. 1 summer variety,” says Yogesh Bhuchke, a trader from Narayangaon.

Syngenta attributes the damage to “unfavourable micro-climatic conditions, cloudy weather, unseasonal rains followed by higher humidity and hot weather.” In an email response to *The Hindu*, K. C. Ravi, vice-president, Commercial Acceptance and Public Policy, Syngenta South Asia, said: . “Our technical team visited the plots of affected farmers, explained the causes of damage and also provided them recommendations for the future. A survey is on for determining compensation.”

The market yard in Narayangaon is a telling picture of the tomato debacle. Small traders and suppliers potter from one truck to another inspecting the stock

— the remains of last season’s harvest. Big traders twiddle their thumbs inside their sheds as they oversee the loading and unloading of crates. Not many invoices have been prepared.

Spread over seven-and-a-half acres, the market retains some of its buzz, as trucks and pick-up vans carrying tomatoes for sale come in, and ‘loaders’ (a local term for trucks making deliveries to places outside Maharashtra) heave past the maze of activity towards NH50 (Pune-Nashik) and beyond.

The blue, green, orange and red crates move about in an enormous cycle of sale, purchase, delivery. Tomato prices may have soared to Rs. 900 a crate, but supply is so little that the economics works neither in favour of the farmer nor the trader. “There is no business this year. What you see is only 10 per cent of the production of previous years. My annual turnover is Rs. 25 crore; this year it won’t even touch Rs. 5 crore,” says Jalinder Thorve, a big trader.

According to data collected by Gadhave, 770 metric tonnes (MT) of tomatoes arrived at Narayangaon market in April as compared to 4,745 MT last April. This month, 4,926 MT arrived and were sold at Rs. 26 a kg compared to 51,327 MT tomatoes sold at Rs. 15 last June. Locals talk of how around this time of the year, when the summer stock hits the market, there is no place to stand. Around 5,000 labourers work in the yard.

On this day, though, there was enough space to take a leisurely stroll. Farmer Sachin Bhise from Yedgaon village has come with 350 crates of which he has sold 250. In the open auction, there are no agents or middlemen between farmer and buyer. Tomato is the only item sold in this manner and the farmers decide the price for their produce. The initiative, proposed by Gadhave in 2004, earned him much recognition and appreciation from former Agriculture Minister Sharad Pawar.

The direct auction rooted out the agents and lined the pockets of tomato farmers. “When I visited markets in Ludhiana, Kota, Delhi and Lucknow, I realised traders were looting us. So we decided to form core committees of tomato growers in each village and invited buyers from these places. On the first day of the auction in 2004, the turnover was Rs. 3.2 crore. By 2014, it touched Rs. 191 crore,” says Gadhave.

The summer scare has forced farmers to think about changing their cropping pattern. Bhor and some other farmers have started growing beans to offset some of their losses. But with the onset of monsoon, fresh hope and a new round of tomato sowing has begun. As a lucrative cash crop and a kitchen staple, the tomato is here to stay. The farmer of Narayangaon is unwilling to abandon it anytime soon, seed failure and climate change notwithstanding.

Mumbai-based Rahi Gaikwad is an independent journalist. She writes on caste, human rights and general interest topics.

Crops grown on 'Mars' soil safe to eat

Radishes, peas, rye and tomatoes all grown on the Dutch soil similar to that on the red planet contain no dangerous levels of heavy metals, experts



A researcher inspects the plants grown on Mars and moon soil simulant at the university in Wageningen, The Netherlands. PHOTO: AFP

Dutch scientists said Thursday crops of four vegetables and cereals grown on soil similar to that on Mars have been found safe to eat, amid plans for the first manned mission to the planet.

Abundant harvests of radishes, peas, rye and tomatoes all grown on the soil were found to contain "no dangerous levels" of heavy metals, said the team from Wageningen University in the Netherlands.

"These remarkable results are very promising," said senior ecologist Wieger Wamelink.

"We can actually eat the radishes, peas, rye and tomatoes, and I am very curious what they will taste like."

Future Mars settlers will have to take food supplies with them and then plant crops in order to survive.

So using soil developed by NASA to resemble that of the red planet, the university has been experimenting since 2013 and has managed to raise 10 crops.

But uncertainty remains about whether they would absorb the high levels of heavy metals such cadmium, copper and lead, present in Mars soil.

Further tests are now needed on the remaining six crops, including potatoes, in research which is being backed by a crowd-funding campaign.

NASA plans a manned trip to Mars within the next 10 to 15 years or so, and similar projects are also being pursued, tentatively aiming to set up human colonies on the Red Planet.

The Mars One project has backed the Wageningen experiments and is currently undertaking a third selection to whittle down the remaining 100 candidates hoping to be among their astronauts to 40.

"It's important to test as many crops as possible, to make sure that settlers on Mars have access to a broad variety of different food sources," said Wamelink.IANS

PPP the way forward for farm sector: DG-ICAR

Director-General, Indian Council for Agricultural Research (ICAR), Trilochan Mohapatra has said that in the coming years, private investment and public-private-partnership model would be the way forward if the farm sector were to achieve the goals of increased productivity and for India to accomplish complete nutrition security.

Replying to a specific question about the controversy over genetically-modified crops and a mention of the seed major Monsanto, he minced no words saying that when the company had invested on research and developed a product, it was natural for it to expect return on investment.

“In general, we recommend reduction of area under cotton considering the rainfall of a particular region, but the ultimate objective of Government of India was to reach a stage when cost of seed is brought within the reach of the farmer. A significant challenge before the scientific community and administrators in the country is ensuring more productivity while bringing down cost of cultivation,” he said, on the sidelines of a meeting at the ICAR-National Academy of Agricultural Research Management.

Inadequate production spikes prices of pulses: CEA Arvind Subramanian

Subramanian on Sunday said under-cultivation of pulses and their inadequate production have led to spike in prices, but vegetable prices have more to do with market forces than production.



Chief Economic Adviser Arvind Subramanian(File photo)

Chief Economic Advisor Arvind Subramanian on Sunday said under-cultivation of pulses and their inadequate production have led to spike in prices, but vegetable prices have more to do with market forces than production.

Besides, there has been a shift in dietary habit in which pulses have become core of food habits among the Indian people, but there was inadequate production to meet the demand, Subramanian told an international conference here.

Under the circumstances, cultivation of pulses has to be increased to meet growing domestic demand, he said, adding the Centre has taken note of this and incentivised pulses' cultivation by raising the Minimum Support Price (MSP), besides taking other measures to encourage the farmers to produce such crops on preferential basis.

Technology should have been put to better use to enhance cultivation of pulses' crops, he said.

In the backdrop of surge in tomato price, he said fluctuation in vegetable prices was linked to market forces rather than cultivation.

The markets should be made better to stabilize vegetable prices, he said.

Subramanian also spoke on the need for strengthening the State's role in bridging fiscal relations between the rich and poor people and regretted low fiscal capacity of the country due to unusually low base of tax payers.

The ratio of voters to tax payers in the country stands at four per cent, but it should be 23 per cent for a country at its level of economic and political development, he said and suggested not increasing exemption limits could be a possible solution to augment fiscal capacity.

As a legitimate tool to reduce gap between the rich and poor, the State should build a legitimate mechanism under which there should be delivery of public goods for all, but the bounties for well offs must be reduced and they should be taxed regardless of source of income, Subramanian said.

Stating that the state is spending Rs 76,000 crore on the well offs by way of subsidy on kerosene (Rs 1,857 crore), railways (Rs 3,122 crore), electricity (Rs 26,370 crore), LPG (Rs 28,219 crore), gold (Rs 3,785 crore), aviation turbine fuel (Rs 762 crore), small savings (Rs 11,900 crore), he suggested such dole outs should be done away with.

He also emphasised on spreading JAM, (Jan Dhan-Aadhaar- Mobile) for financial inclusion of the poor people and said the government is moving in the right direction by spreading Jan Dhan and Aadhaar by creating three lakh and five lakh accounts respectively per day in 2015.

He said the Direct Benefit Transfer (DBT) in LPG was a big success.

Smart City mission a mass movement for future: Modi

Describing cities as ‘growth centers’ that can digest poverty and generate employment opportunities, Prime Minister Narendra Modi on Saturday said the government is looking at migration — from rural to urban pockets — as an opportunity instead of a problem.

Speaking at a function organised to mark the first anniversary of the Smart Cities Mission, Modi spoke about the dependency of a large section of the population on agriculture, which was one of the main causes of migration.

“People from the rural areas come to the cities with the confidence that they will get opportunities in the cities to meet their needs. This is the potential of cities,” Modi said, adding that the mission aims at improving the cities by protecting their character and spirit. “It aims to put new energy into cities without changing their identities but ensuring a modern look,” he said.

The PM stressed that the project was not merely a scheme for allocation of funds, but a mass movement to look at the future.

THE HINDU **BusinessLine**

NITI Aayog completes appraisal of 12th Five-Year Plan

Plan document to be replaced with short, medium and long-term strategies

The NITI Aayog has completed the appraisal of the Twelfth Five-Year Plan, which will be placed before its Governing Council that is chaired by Prime Minister Narendra Modi.

The meeting of the Governing Council is expected soon.

NITI Aayog Vice-Chairman Arvind Panagariya on Wednesday said the practice of Five-Year Plans will end after the current Plan gets over in 2016-17. “It

would instead be replaced with three documents,” he told reporters adding that the Vision Document is likely to be in place before Budget 2017.

These would cover the short-term through a three-year Action Plan, the medium-term by seven-year strategy and the long-term by a 15-year Vision Document.

Sources said the economic growth is estimated to have “recovered” in the last two financial years, but had underperformed in 2012-13 and 2013-14. “Going by the old series, the economy performed worse than the policy logjam scenario that was envisaged in the original Plan and pegged growth at 5 per cent to 5.5 per cent,” said a person close to the development, adding that in subsequent years, the economy has seen to have recovered in both the new and the old series.

“The Vision Document will give a sense of what to expect India to be in 2022-23. It will look at measures like per capita GDP, GDP, agriculture, services and manufacturing,” he said, adding that the NITI Aayog has already talked with economists, agriculture specialists and scientists on the issue.

Consultations planned

Significantly, the Aayog will also hold consultations with defence and internal security experts for the Vision document, an area that was not looked into by its predecessor the Planning Commission. Meanwhile, sources said the appraisal of the Twelfth Plan (2012-17) would broadly cover the first four financial years and the Budget Estimate for the current fiscal.

The appraisal would follow nine broad themes including the economy and policies, macroeconomic factors, employment and skill development, governances, human resource development, physical infrastructure, environmental sustainability, agriculture and rural transformation and urban transformation.

PSU disinvestment

The NITI Aayog, which is in charge of identifying loss-making public sector units for strategic sales, has also submitted two reports to the government and is working on a third report on the issue.

“We have submitted two reports — on loss making and sick PSUs and second on PSUs identified for strategic disinvestment,” said Panagariya, adding that the third report would also focus on firms for majority stake sales.

Business Standard

Maharashtra seeks \$600-million loan from World Bank

State has sought the loan for a water conservation project to be implemented in 20,000 drought-hit villages



Maharashtra government has sent a proposal to the World Bank seeking a loan of \$600 million for a water conservation project to be implemented in about 20,000 drought-hit villages of the state, Chief Minister Devendra Fadnavis said today.

"State government has sent a proposal to the World Bank seeking a loan of \$600 million on low interest rate... It is anticipated to be sanctioned shortly. We envisage to utilise the fund by implementing a water conservation project in nearly 20,000 villages in next five years," Fadnavis said while addressing a farmers' rally in Kagal tehsil here.

He said the project, aided by the World Bank, will help drought-stricken villages overcome parched conditions which have been prevalent in the state for the last couple of years.

The chief minister said far more investment is needed in agriculture for sustainable and reasonable farming. He appealed to the farmers and others to participate in the state-run Jalayukt Shivar Yojana.

"We have to focus on proper water management and will have to create water bodies in a decentralised manner. Big dams are necessary but decentralised water bodies are also necessary," Fadnavis said.

The chief minister also explained about the relation between drip and micro irrigation and better productivity in farms and said there is huge difference in irrigation through canals and drip.

"Drip irrigation definitely improves productivity. Keeping this in mind, state government is now in favour of supplying water through pipes instead of canals," he said.

Meanwhile, Fadnavis said that development of Kolhapur airport is on the priority list of the government.

Addressing a function of local industrialists at Shirol, the chief minister appealed to them to contribute towards 'Make in India'.

He also assured his government's support in introducing modern technology in foundry units in Kolhapur.



THE TIMES OF INDIA

CM invites investments in agriculture

Chief minister Harish Rawat on Sunday invited entrepreneurs to invest in the agriculture sector of the state. Addressing a meeting of Uttarakhand Industrial Welfare Association, which was attended by as many as 200 industrialists and entrepreneurs from the state and outside, Rawat said that the hill state was ready for investments in this sector and was willing to collaborate with firms on a Public Private Partnership model.

"A series of measures taken by the Congress government during the past four years have already begun to pay off by giving desired results on the farming front and investment in farming by industrialists will help boost the agricultural economy. It will also open new job opportunities to thousands of youths and other unemployed persons in the agriculture sector," said Rawat.

Rawat also said that the recent schemes of the state government - such as awarding monthly bonus and prizes to those contributing towards enhancing the yields of different crops and food grains like mandua and jhanghora - have helped boost the agricultural economy considerably.

Chief secretary Shatrughana Singh, who was part of the meeting, said, "If the industrial houses are keen on this front, our joint venture based on public-private partnership mode will produce the desired results."

Investors have welcomed the CM's call for investment. "We will consider CM Rawat's offer. There is potential to augment agriculture production in hill and plain districts across the state," said industrialist Pankaj Gupta, who attended the meeting.

To cut losses, soy farmers also sowing other kharif crops

With the arrival of monsoon, farmers across the region have begun sowing of kharif crops like soybean, arhar, moong, urad and maize.

As per official figures, this time soybean has been sown in 2.20 lakh hectare in areas near Indore, indicating that there was no shift in crop sowing pattern despite soy industry facing huge losses. Arhar has been sown in 1000 hectares and moong, urad and maize in 5000 hectares in Sanwer, Ujjain, Shajapur and nearby areas.

"In major part of the region soybean has been sown with other kharif crops. We are aware of the fact that soy farmers have been facing losses due to less production. Farmers should sow different varieties of soybean so that they will not be dependent on a single variety," said agriculture deputy director Alok Meena. Tnn

Crop insurance scheme to be implemented soon

Around 60% of the funds provided by the central government under the crop insurance scheme would be given to the agriculture sector soon, while the remaining 40% would be dedicated to associated sectors, said district collector N Yuvaraj here on Saturday. Speaking at the ZP general body meeting, joint director of agriculture V Satyanarayana said all measures were being taken to ensure that the seeds and fertilisers for the Kharif season were properly distributed to the farmers. The collector further noted that borewells were being dug in places which had no water resources . ZP chairperson Lalam Bhavani observed that the state government was implementing all the schemes in the rural belt as well as in certain semi-urban areas and noted that drinking water would be chlorinated to ensure safety.

THE ECONOMIC TIMES

Monsoon gathers momentum, sowing picks up

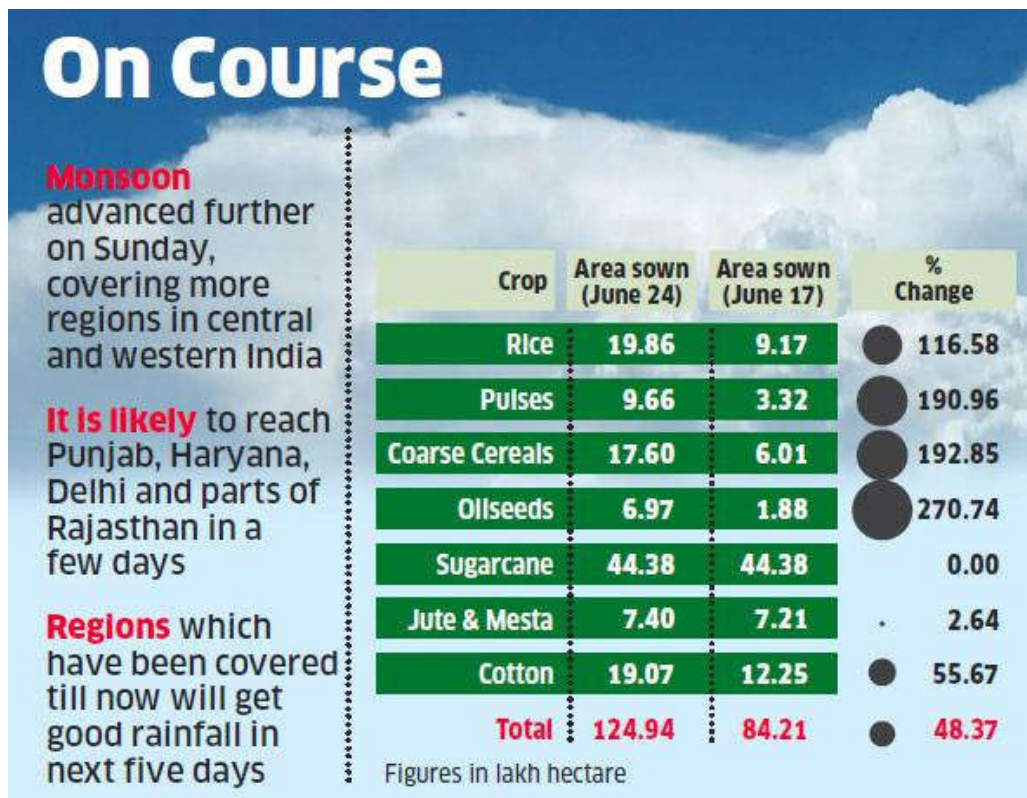


Increased rainfall has already accelerated crop planting, which expanded 48% to 125 lakh hectare in the past week although it still lagged behind the same period last year.

PUNE: The monsoon has bounced back emphatically and is on track for a strong run in the weeks ahead, cheering farmers who were rattled by the unexpected lean patch with rainfall 25% below normal in mid-June.

The rainfall deficit has narrowed to 16% as the monsoon raced up to Kashmir and delivered heavy showers in the regions it has covered so far after starting late and advancing at a snail's pace in the first three weeks of the month.

Increased rainfall has already accelerated crop planting, which expanded 48% to 125 lakh hectare in the past week although it still lagged behind the same period last year, when rainfall was significantly higher before drought-like conditions set in. Planting of rice more than doubled in a week while area under pulses has trebled, signalling higher output of lentils, which should ease food inflation.



The monsoon advanced further on Sunday, covering more regions in central and western India. It is expected to reach Punjab, Haryana, Delhi and parts of Rajasthan in a few days. "Other regions of the country, which the monsoon has covered, are going to get good rainfall in next five days," said PCS Rao, director at India Meteorological Department's PUNE centre.

"Except for Punjab, Haryana, Jammu & Kashmir and west Rajasthan, other regions of the country, which monsoon has covered, are going to get good rainfall in next five days," Rao said. "Saurashtra and Kutch in Gujarat and Vidarbha (in Maharashtra) too will get good rainfall. Rainfall will be scattered in Rayalseema, Tamil Nadu and north interior Karnataka, but increase after four to five days."

In its latest monsoon update, the IMD said three factors were influencing the monsoon: end of El Nino conditions; a pulse of clouds and wind along the equator called the Madden Julian Oscillation; and differences in temperature between eastern and western parts of the Indian Ocean. "Above large scale features are favourable for monsoon activity over Indian region," the weather office said.

Higher rainfall is expected to fill up reservoirs, which are severely depleted in many regions, and completely dry in some areas. Reservoirs were filled to

barely 15% of capacity last week, which was about half of the level last year.

Inadequate production spikes prices of pulses: CEA Arvind Subramanian



In the backdrop of surge in tomato price, he said fluctuation in vegetable prices was linked to market forces rather than cultivation.

PATNA: Chief Economic Advisor Arvind Subramanian today said under-cultivation of pulses and their inadequate production have led to spike in prices, but vegetable prices have more to do with market forces than production.

Besides, there has been a shift in dietary habit in which pulses have become core of food habits among the Indian people, but there was inadequate production to meet the demand, Subramanian told an international conference here.

Under the circumstances, cultivation of pulses has to be increased to meet growing domestic demand, he said, adding the Centre has taken note of this and incentivised pulses' cultivation by raising the Minimum Support Price (MSP), besides taking other measures to encourage the farmers to produce such crops on preferential basis.

Technology should have been put to better use to enhance cultivation of pulses' crops, he said.

In the backdrop of surge in tomato price, he said fluctuation in vegetable prices was linked to market forces rather than cultivation.

The markets should be made better to stabilize vegetable prices, he said.

Subramanian also spoke on the need for strengthening the State's role in bridging fiscal relations between the rich and poor people and regretted low fiscal capacity of the country due to unusually low base of tax payers.

The ratio of voters to tax payers in the country stands at four per cent, but it should be 23 per cent for a country at its level of economic and political development,

he said and suggested not increasing exemption limits could be a possible solution to augment fiscal capacity.

As a legitimate tool to reduce gap between the rich and poor, the State should build a legitimate mechanism under which there should be delivery of public goods for all,

but the bounties for well offs must be reduced and they should be taxed regardless of source of income, Subramanian said.

Stating that the state is spending Rs 76,000 crore on the well offs by way of subsidy on kerosene (Rs 1,857 crore),

railways (Rs 3,122 crore), electricity (Rs 26,370 crore),

LPG (Rs 28,219 crore), gold (Rs 3,785 crore), aviation turbine fuel (Rs 762 crore), small savings (Rs 11,900 crore), he suggested such dole outs should be done away with.

He also emphasised on spreading JAM, (Jan Dhan-Aadhaar- Mobile) for financial inclusion of the poor people and said the government is moving in the right direction

by spreading Jan Dhan and Aadhaar by creating three lakh and five lakh accounts respectively per day in 2015.

He said the Direct Benefit Transfer (DBT) in LPG was a big success.

Monsoon's June deficiency to narrow: Weather office



The deficiency in June rains will also narrow in the days the come.

NEW DELHI: Monsoon is likely to withdraw from India later than usual this year, with a vigorous spell of rains towards the tail end of the season that typically ends in September, the chief of the weather office said on Friday.

The deficiency in June rains will also narrow in the days the come, Laxman Singh Rathore told Reuters in an interview.

"There is a strong possibility that the terminal phase will be wetter and the withdrawal will be later than normal," Rathore said.

Monsoon rains, vital for India's farm-dependent economy and its 1.3 billion people, arrive at the southern coast of Kerala state by June 1 and start retreating by September from the western state of Rajasthan.