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THE HINDU

Early rains bring cheer to Anantapur farmers

Anantapur district experiencing rain for the last four days

After continuous years of drought, early rains this year raised a ray of hope for farmers in the district.

For the first time in the last several years, the district received timely rain in the form of pre-monsoon showers, even as the monsoon advanced into India on Wednesday helping farmers till their land and go in for early sowing. The kharif season, which generally starts in June in Anantapur, has been delayed over the years. However, with the district receiving incessant rain for the last four days, agricultural activities have also started early.

Over the last days, the district received more than 1500 mm rainfall taking the total rainfall in the month to well over 2300 mm, an excess rainfall of over 30 per cent for the district during this period of the year.

In the last two days, the district received close to 1000 mm rainfall with the towns like Dharmavaram having its streets flooded with rainwater.

Dharmavaram town received close to 65 mm rainfall, while the adjoining mandals of Mudigubba and Battalapalli received over 20 mm of rainfall.

While a majority of mandals in the district received good rainfall, in some mandals such as Gummagatta (4.3 mm), Brahma Samudram (7.6 mm) and Gandlapenta (6.9 mm), it was low.

However, farmers are hopeful of a good monsoon this year.

Usually an early monsoon means well spaced out intervals of rain which could prevent long spells of dry season.

We hope a good rainfall this year which results in better harvest, says Pradeep Kumar Reddy, a farmer from the Tadipatri mandal.

District experiencing rain for

the last four days and agricultural activities start early

Rs. 1.65-lakh cr. credit plan for 2016-17 unveiled

It is in excess of projections made in State focus paper of NABARD

The State Level Bankers' Committee (SLBC), which met here on Thursday, released the annual credit plan for 2016-17 with an outlay of Rs. 1.65 lakh crore. Of this, Rs. 83,003 crore has been earmarked for agriculture and allied activities. The projections for micro, small and medium enterprises are R. 17,355 crore. The export credit projections are Rs.180 crore and non-priority sector lending is Rs. 40,000 crore.

The outlay for agriculture sector is increased by 27 per cent over last year's target of Rs. 65,272 crore. It is also a 10 per cent increase over last year's achievement of Rs. 75,448 crore.

Thrust area

The annual credit plan gave a major thrust for dairy development with a credit projection of Rs. 5,536 crore. An amount of Rs. 1,299 crore is allocated for poultry, Rs. 1,713 crore for fisheries development, Rs.1,233 crore for other livestock like sheep, goat and pigs. The plan for agriculture infrastructure and ancillary activities is Rs. 983 crore. The credit outlay for these sectors is apparently in tune with the State government's ambitious plans to develop dairy, fisheries, sheep rearing etc.

The projections for self-help groups (SHGs) are Rs. 11,730 crore. Of this, Rs. 11,405 crore is for rural SHGs and Rs. 325 crore for urban SHGs. An amount of Rs. 12,000 crore is earmarked for housing sector including Rs. 7,340 crore covered under PMAY. An amount of Rs. 2,155 crore is projected towards education loans.

The State credit plan is in excess of projections made in State focus paper of NABARD 2016-17. The outlay for agriculture sector is Rs. 78,822 crore in NABARD focus, while it is Rs 83,003 crore in State credit plan. The priority sector lending was pegged at Rs. 1,21,765 crore in NABARD paper. However, the outlay is Rs. 1,25,538 crore in the credit plan.

The total priority sector lending achievement is Rs. 1.04 lakh crore as against target of Rs. 96,920 crore. Likewise, the non-priority sector lending stood at Rs. 39,928 crore as against target of Rs. 28,828 crore.

Chief Minister N. Chandrababu Naidu released the credit plan. Andhra Bank managing director and CEO Suresh N Patel was present.

It is in excess of projections made in State focus paper of NABARD

Study on raising paddy under drip irrigation

Boon to farmers getting inadequate water for irrigation

NEW WORK:P. Pandiyarajan (left), Dean, Anbil Dharmalingam Agricultural College and Research Institute, Tiruchi, examining a drip irrigation technique in rice on Thursday.— Photo: A. Muralitharan

The Tamil Nadu Agricultural University – Anbil Dharmalingam Agricultural College and Research Centre near here, has taken up research on raising paddy through drip irrigation under a project funded by an Israeli company.

Titled, 'Feasibility of growing rice under drip irrigation', the experiment has been taken close to the 'kuruvai' season and scientists have planted four varieties 'TRY II', 'ADT 45', 'ADT 36' and 'Anna (R) 4' for ascertaining the growth of paddy in saline fields on the campus of the institute.

The institute, located in the Manikandam block, has taken up various research programmes on evolving paddy varieties suitable for sodic soil. Netafim', an Israeli company specialising in drip irrigation technique, had sanctioned Rs. 4 lakh to the tnstitute to take up the research, said P. Pandiyarajan, Dean of the Institute.

Speaking to *The Hindu* after inaugurating the programme, Mr. Pandiyarajan said that this was the first time the institute had taken up the research using drip irrigation technique, although similar experiments had been conducted at Aduthurai and other places. About 2 kg of seeds was used for each variety. He said that the experiment would include study on nutrient management, irrigation

management and good cultivation practices. The entire 60 cents of the field has been covered with over 77 laterals, each of 50 metre in length. “Each lateral contains 130 holes or drip spacing through which water and water-soluble fertiliser will be supplied,” he said.

T. Ramesh, Assistant Professor of Agronomy, who has been coordinating the programme, said all parameters including the rainfall received during the research period, climatic change will be closely monitored. In addition, a few cultures which are under research had been included for the research. The growth of the plant with fertiliser, without fertiliser, with nitrogen, with less nitrogen would be analysed.

The research will be a boon to farmers getting inadequate water for irrigation. It will guide the farmers with abundant availability of water to utilise the resource judiciously. “These are the other objectives of the programme,” he said .

Water released from dams for ‘kar’ paddy cultivation

Areas close to Western Ghats receive significant rainfall

FAST AND FURIOUS:Water being released from Papanasam dam on Thursday.

Even as the reservoirs in the district have started receiving significant influx of water following the onset of southwest monsoon, Collector M. Karunakaran released water from Papanasam dam on Thursday for ‘kar’ paddy cultivation.

Speaking to reporters after releasing water, Dr. Karunakaran said the discharge of water from Papanasam, Manimuthar and Servalar dams would be sustained up to October 31. The release of water from the dams in North Kodaimelazhagiyan, South Kodaimelazhagiyan, Nadhiyunni, Kannadiyan,

Kodagan and Palayam Channels would benefit the crop to be planted on 20,595 acres.

“The State government has ordered release of 600 cusecs of water from the dams and the quantum of discharge will be increased if the influx increases due to active monsoon. The water release will benefit the farmers of Ambasamudram, Nanguneri, Tirunelveli and Palayamkottai taluks,” Dr. Karunakaran said.

He appealed to the farmers to follow System of Rice Intensification method to get the maximum yield by using minimum quantity of water.

Cheranmahadevi Sub-Collector V. Vishnu, PWD Superintending Engineer Abdul Hameed, Joint Director of Agriculture P.S. Karunakaran and Ambasamudram Tahsildar Irudhayaraj were present.

Rainfall

With 99 mm rainfall in the catchment areas on Thursday, Papanasam dam received an inflow of 6,248 cusecs, and water level rose from 67 feet to 76 feet.

The level in Servalar dam rose from 84 feet to 103.80 feet after the catchment areas recorded a rainfall of 24 mm.

Meanwhile, the tourists visiting Courtallam were allowed to take bath in all the waterfalls on Thursday.

While the areas close to the Western Ghats received significant rainfall, taluks like Radhapuram, Nanguneri, Tirunelveli and Palayamkottai experienced mild drizzle.

Rainfall recorded at various places in the district was (in mm): Papanasam dam 99, Adavinainar dam 51, Manimuthar dam 34, Shencottai 31, Aayikudi 30.50, Gadana dam 25, Servalar dam 24, Tenkasi 23.90, Kodumudiyar dam 17, Ramanadhi dam 16, Karuppanadhi dam 12, Ambasamudram 8.90, Nanguneri 8, Sankarankovil 7, Cheranmahadevi 4.40, Radhapuram 4.20, Tirunelveli 4 and Palayamkottai 1.

NABARD assures more aid

The National Bank for Agriculture and Rural Development (NABARD) has assured to provide a further loan of Rs.2,200 crore for the Mission Bhageeratha works towards providing piped drinking water to rural Telangana, for the year 2016-17. In a meeting with the Special Chief Secretary of Panchayat Raj, S.P. Singh, on Thursday, senior officials of NABARD discussed the progress of

works undertaken in Gajwel, Narsapur, Sangareddy, and Narayankhed segments with NABARD funds the previous year.

The officials said the second instalment of the promised Rs.1,976.8 crore for these segments will be released soon, besides assuring to provide financial assistance for the intra-village works in these segments.

The meeting also discussed the works to be taken up in the current year and next year with NABARD funds, a press release informed.

More produce with grafted vegetables

Good news for vegetable farmers in the State. Availability of grafted vegetable seedlings will be substantially increased as grafting technology, hitherto restricted to a few Kerala Agriculture University scientists, has been passed on to field officers of the VFPCK (Vegetable and Fruit promotion Council Keralam) and VHSE (Vocational Higher Secondary Education) teachers.

The KAU has started its training programme on vegetable transplant production and grafting. The objective is to increase vegetable production.

KAU Vice Chancellor P. Rajendran stressed the importance of quality of planting materials in qualitative and quantitative enhancement in vegetable production.

“Having progressed from the use of seed to seedlings and other planting materials, grafted vegetable seedlings is the best and the most important step we have taken in technology development. The technology developed by KAU scientist Narayanan Kutty is simple but efficient and a breakthrough in the development of wilt-resistant grafts of commonly-cultivated and popular vegetables. Immunity to bacterial wilt means a significant enhancement in vegetable production. The technology of combining the yield of hybrids and wilt resistance of selected varieties has become a blessing for the farmers and a vital step towards self-sufficiency in vegetable production,” he said.

He felt highly optimistic on the popularisation of grafting technology through VFPCK officers from all districts and VHSE teachers.

Resistant to wilt, drought

“Once this becomes popular, each household will have vegetable plants resistant to wilt and drought, enhancing the quality and quantity of production, leading to a welcome change in the current scenario where we spend substantial

sum on procuring vegetables from across the border. Safe-to-eat food and nutritional security will become a reality," he said.

P.B. Pushpalatha, Director of Extension, appreciated the move to train VFPCK field officers and VHSE teachers in grafting technology and said more cohesive collaboration between the KAU, the technology provider, and line departments and PSUs in the field would help effective popularisation of technologies.

Technology, restricted to a few KAU scientists, passed on to field officers and VHSE teachers

Madurai achieves paddy harvest target

This is achieved despite a fall in area under cultivation

Despite limitations and last minute struggle to get water for irrigation for the standing paddy crop, farmers, including small and marginal groups, in the district have achieved the target, thanks to the use of technology.

Speaking to ***The Hindu*** , Joint Director of Agriculture S. Kanagaraj said on Thursday that data revealed that farmers' had achieved not only in terms of production, but also in yield and productivity.

Paddy was raised on 52,000 hectares in the district – kuruvai on 4,000 ha, samba 41,000 ha and kodai 7,000 ha – against 54,759 ha covered last year, he said, adding the farmers had achieved fairly well also in the harvest of millets which covered 26,000 ha against the targeted 28,700 ha. The normal crop coverage of millet in the district was 22,000 ha.Though there was a declining trend in crop coverage area, technology had come in handy to the farmers. Training in better use of water and fertilizers had brought about desired results, he said.

Mr. Kanagaraj said farm activity for the ensuing (first crop) season was expected to be good. Reports that southwest monsoon was setting in and rainfall had started in catchment areas were positive indicators.

From 75 cusecs till Wednesday, the inflow into Mulla Periyar dam increased to 443 cusecs on Thursday. "If the trend continues, the storage level may touch 120 ft soon," he said. He expressed hope that water for irrigation from Peranai to Kallanthiri would be possible.

With good inflow, water for the first crop could be released by the month-end. He recalled that PWD engineers were able to release water from the dam only around August 15 last year against the usual time of mid-June.

Water users' association members in the district expressed happiness over the developments and hoped that the area under paddy cultivation might go up this season.

The weather stations established at 13 places in the district were useful to the farmers in checking various aspects related to crop management. With the facility available in hand phones, the farmers could get daily forecast of weather, rainfall, temperature, wind, moisture content, etc., to plan their activity. The weather stations at all the places, except Alanganallur and Vadipatti, functioned well, he added.

"Training in better use of water and fertilizers has

brought about desired results"

Agricultural app aims to help farmers

A new sowing app for farmers, combined with a personalised village advisory dashboard for Andhra Pradesh, is hoping to make radical improvements for agriculture and small-holder farmers in the State.

The sowing app is to help farmers achieve optimal harvests by advising on the best time to sow crops depending on weather conditions, soil and other indicators. This has been made possible through a partnership between the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Microsoft, and the Andhra Pradesh government.

The pioneering digital tools were released by ICRISAT, with development undertaken by Microsoft. The personalised village advisory dashboard has been especially developed to enable officials of Andhra Pradesh Primary Sector Mission (APPSM) - Rythu Kosam, to better manage programmes of scale.

"Bringing a lot of scattered data together and developing an analytical tool that is comprehensive and gives accurate predictions to farmers, is urgently needed. We are excited to work with Microsoft to enhance incomes and improve the lives of small-holder farmers, and this is going to boost our digital agriculture initiative in a big way," said Dr. David Bergvinson, director general of ICRISAT.

ICRISAT has adopted Microsoft Cortana Intelligence Suite, including machine learning (ability of computers to learn without being specifically programmed) and power BI – business intelligence, to empower farmers and government officials with technology, and promote digital farming practices in the State.

Anil Bhansali, managing director, Microsoft India (R&D) pvt. ltd., said: “We are pleased to support ICRISAT to drive impact for farmers through our technology.

The sowing app and personalized village advisory dashboard are developed to provide powerful cloud-based predictive analytics to empower farmers with crucial information and insights to help reduce crop failures and increase yield.”

Artificial intelligence

The sowing application utilises powerful artificial intelligence to interface with weather forecasting models provided by U.S.-based aWhere Inc. and extensive data, including rainfall over the last 45 years as well as 10 years of groundnut sowing progress data for Kurnool district.

ICRISAT is providing technical backstopping to Rythu Kosam, which is aimed at positioning the State among the best three performing States by 2022. This technical input involves the establishment of pilot sites of learning in 13 districts of 10,000 hectares each, upgrading soil analysis laboratories, technical support for planning, as well as adopting an inclusive market-oriented development (IMOD) strategy to benefit small-holder farmers through public-private partnerships and promoting private investments in the State.

Making dairy farming a profitable venture

Good move:Shankar Kotian at his dairy near Moodbidri.— photo: Raviprasad Kamila

The techie, who spent 11 years of his 15-year career in 10 countries abroad and returned to his native village at the foothills of the Western Ghats, is today making profits as a dairy farmer.

Though M. Shankar Kotian started the dairy at Moodu Konaje village sometime ago, he has started making profits out of the enterprise now.

“Milk is the only farm product where one can get 80 per cent of the retail price. And it drew me to dairying,” Mr. Kotian said. Started with five cows on the 8 acre land in a serene atmosphere, he now has 40 head of cattle, with 19 milking right now. He has been selling about 200 litres of milk a day to Dakshina Kannada Cooperative Milk Union Ltd. and earns an average Rs. 31 per litre.

“Dairying is like a Test match. You have to be patient,” he said, as one cannot expect “profit” immediately. But dairying is the only farm activity where one could get daily income or weekly income and market the product directly to customers without middlemen.

Mr. Kotian also uses gobar gas for cooking and sells slurry to farmers. So far he has sold about 3 lakh litres of slurry.

Last rainy season, he grew 70 kg of paddy in 4 cents of land (435 sq. ft). He nurtured his crop with only “jeevamruta” (a mixture of cow urine, cow dung, jaggery, soil and sugarcane juice), he said.

Well-trained

Interestingly, he did not jump into farming without a thought.

He did so after studying dairying in Switzerland and other countries and preparing a business model for his ven ture in the village. He has machines to milk the cows. “I do not know how to milk manually!” admits Mr. Kotian candidly.

An alumnus of NITK, Surathkal, he completed B.Tech. in computer science in 1996.

His family did not have any inherited farmland and his parents were not farmers. Hence dairying was totally new to him.

Coming back to the nature was a conscious decision. I and my wife were ready to downgrade our lifestyle. When the company applied for the U.S. green card for me, I stopped it and decided to come back home.

M. Shankar Kotian

Youngsters come together to help drought-affected farmers

The group is distributing 15 kg redgram per farmer in Medak district and 20 kg soyabean per farmer in Latur district of Maharashtra

Doing their part to help those in need this Ramzan, a group of like-minded youngsters, led by two persons, is helping drought-affected farmers in 15 villages in Telangana and Maharashtra by supplying them seeds. The duo – Mujtaba Hasan Askari of an NGO and Khurram Askari, head of a rural activation company – hope to help 500 farmers through their efforts.

"From its commencement, eight villages – Kansanpally, Peddapur, Dadepally, Gajilguda, Chitria, Ailkurti, and Salojpally of Medak district – have been successfully covered. We are looking forward to cover the rest by June 12," said Mujtaba. He added that farmers who have received the seeds have already started sowing them.

Mr. Hasan stated that farmers are expected to earn Rs. 10,000 to Rs. 12,000 per acre if the monsoon is good. He added that since the seeds are helpful only during the Kharif season, the programme is limited to Ramzan. "Future plans will be made based on the response."

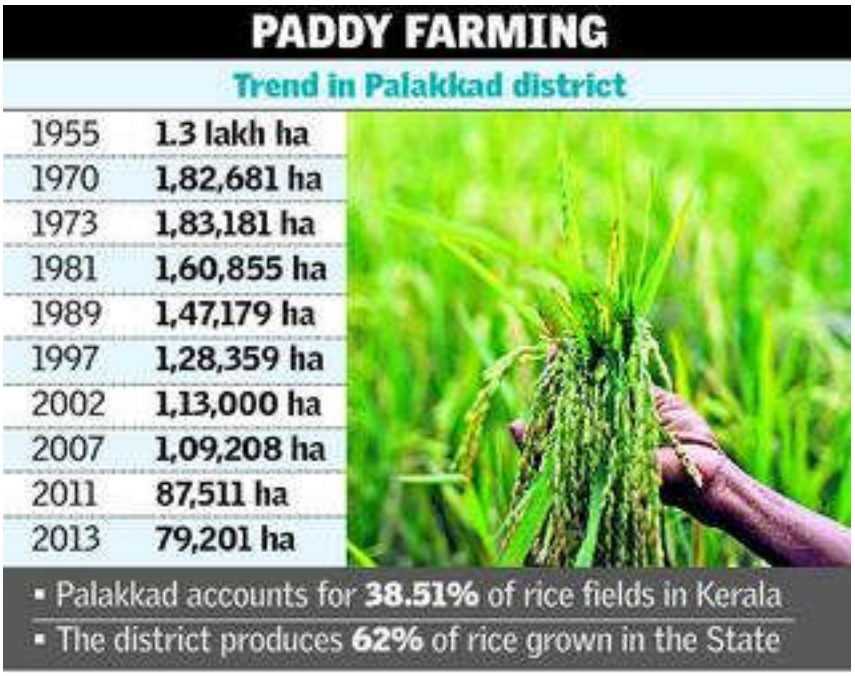
The group is distributing 15 kilogramme of redgram per farmer in Medak district and 20 kg of soyabean per farmer in Latur district of Maharashtra. The whole programme is likely to cost them a sum of Rs. 6 lakh, said Mr. Hasan.

Seeds have been booked with TS Seed Development Corporation to ensure quality and competitive prices, he said, adding that seed distribution started from June 5. "The plan is to reach out to these farmers directly in geographical clusters through a special van, which cover each of these rural villages," he said.

So far, the identified 86 farmers in Maharashtra were from the four drought-affected villages in Latur – Murud, Borgaon, Gumfawadi, and Khandala, said Mr. Hasan. Another 300 farmers were from Medak villages of Kansanpally, Peddapur, Dadepally, Gajilguda, Chitria, Ailkurti, Salojpally, Seripally, and Kohir, he said.

Paddy fields vanish in Kerala's rice bowl

'Palakkad district has lost 1,03,980 hectares in last 4 decades'



Though Palakkad district is still considered the traditional rice bowl of Kerala, its paddy fields are vanishing at an alarming rate with farmers taking to other lucrative crops and the real estate mafia altering the land-use patterns. According to studies done by the geography department of the Government College in Chittur, near here, the district has lost 1,03,980 hectares of paddy fields in the last four decades.

The decline in paddy cultivation and large-scale reclamation of traditional rice fields have started adversely affecting groundwater availability in the district. As paddy fields can regulate atmospheric temperature to some extent, study by the department attributes the increasing daytime temperature in Palakkad district to large-scale reclamation of paddy fields.

"The district had 1,83,181 hectares of rice fields in the beginning of the 1970s. At present, it has hardly 79,201 hectares. Even the Kerala Conservation of Paddy Land and Wetland Act of 2008 to conserve paddy fields has failed to arrest the trend," said Richard Scaria, an assistant professor with the department.

Dangerous trend

“Though rice fields in Palakkad constitute hardly 38.51 per cent of the acreage under paddy cultivation, it still accounts for 62 per cent of rice production in the State,” he said. As per surveys conducted by the department, about 25 hectares of rice fields are reclaimed every year to cultivate cash crops and to convert to real estate. If the trend continues, paddy fields in Palakkad will “disappear” in another 35 years.

Lack of government support, delay in release of procurement price, climate change impact, and change in land-use patterns are preventing farmers from continuing with paddy cultivation.

Besides, there is a growing preference among farmers for ginger cultivation. Rice fields are being leased out to farmers from outside the State to cultivate ginger. Real estate lobbies buy paddy fields from farmers at cheap rates and convert them to housing plots. “The farmers are forced to sell the fields owing to loss in paddy cultivation,” says farmers’ leader Muthalamthode Mani.

High yield of jasmine cheers farmers

High yield, thanks to recent showers, has let to abandoned arrival of Jasmine flowers in Salem.— Photo: E. Lakshmi Narayanan

Widespread rainfall experienced by the district during the summer months has led to increased yield of jasmine flowers, bringing much cheer to the farming community.

Though the mercury rose mercilessly in the initially period of the present summer season, the district experienced widespread rainfall during last month. The sudden rainfall came to the rescue of particularly the flower farmers of the district. Following increased yield, the VOC Market in the city, one of the major flower markets in the western districts, have been receiving heavy flow of jasmine.Due to this, the price of flowers has registered a downward trend. The VOC flower market used to receive about three tonnes of jasmine daily. However, for the past few days the arrival of flowers from Kannankurichi, Panamarathupatti, Vazhappadi, Valasaiyur, the major jasmine production centres of the district, has been on the increase. The VOC has been receiving about eight tonnes daily for the past one week.

The price of jasmine which remained between Rs. 60 and Rs. 80 per kg last week, has gone up to Rs. 100 now. The price hike is mainly due to the marriage and festival season ahead, according to S. Chakravarthi, a flower merchant

.The abundant summer rainfall, has led to increased yield of samangi flowers in Tiruvannamalai, Dharmapuri districts too. The flower market has been receiving increased arrival of samangi flowers from these districts.

The price of jasmine which remained between Rs. 60 and

Rs. 80 per kg last week, has gone up to Rs. 100

Prospects of good rains raise hopes among farmers

Farmers in the command area of about 10,000 irrigation tanks that have either been revived in all respects already or in the final stages of completing restoration works under the Mission Kakatiya programme are in for a promising crop year with the prospects of copious monsoon rains.

About 30-lakh acres land under these tanks is likely get benefited either directly or indirectly if the prediction of weathermen comes good as the farmers having holdings there would have better prospects in cultivation.

Nevertheless, the early monsoon rains are likely to play spoilsport with the progress of Mission Kakatiya second phase works, although the delay in completion of first phase works is attributed to late grounding of works. “Early rains will bring curtains on the de-siltation of tank beds even through bund strengthening work and repairs to sluices and spillways can continue for some

more days as it will take some time for water to reach such structures", official sources told *The Hindu* .

The Irrigation Department, particularly the functionaries of Mission Kakatiya, is banking heavy hopes on the prospects of good monsoon this year as their toil for two seasons is expected to bear fruit with the restored tanks getting impounded with water up to their designed capacities.

With the experience in the first two phases of one of the flagship programmes, the State Government has already decided to advance the process for the third-phase of Mission Kakatiya. "The engineers have already been told to sanction works by December-end and take up works from January itself, wherever there is no water in tanks", the senior engineer said.

In spite of repeated reminders and warnings issued to the officials concerned, some of the first phase works of Mission Kakatiya are still under progress. When contacted, Chief Engineer of Minor Irrigation (MK) B. Nagendra Rao stated that works on 6,844 tanks taken up under phase-one were completed in all respects and only 5 per cent to 10 per cent works were under completion with regard to another 1,200 tanks. Works on another 1,000 tanks were also completed in all respects under the second phase.

On the inflows into tanks due to pre-monsoon rains the Chief Engineer said: "There were some inflows at some places in Mahabubnagar, Ranga Reddy, Warangal and Adilabad districts but they have percolated down the soil except in a few cases where there was 7 cm to 8 cm rain in the catchment areas of tanks". They were hopeful of all the works completed showing results this year, he stated.

Onset of Southwest monsoon alters dynamics of cattle sale

Demand-supply dynamics apparently reflected at the Karunkalpalayam weekly shandy on Thursday owing to the onset of Southwest Monsoon.

There were expectations that the transactions will witness a surge since there was a disruption in business for more than two months due to observance of election code of conduct. Disruption was caused by the restriction on carrying cash beyond a specified limit.

There were, of course, buyers in large numbers, but the turnout of sellers was lesser than usual, and hence, the number of cattle brought for sale also declined.

There were about 750 heads of cattle - 400 cows and 350 buffaloes - brought for sale to the market against the usual 900 to 1,000.

SLIGHT SLIDE:Lesser than usual number of cattle were brought for sale at the weekly shandy at Karunkalpalayam in Erode on Thursday.

The sellers had cause for satisfaction since their cattle fetched upwards of Rs. 16,000 each.

And over 85 per cent of the cattle could be sold to buyers from various parts of Tamil Nadu and neighbouring States.

“More number of cattle are sold during the summer months when there is water scarcity and shortage of fodder.

Reluctance on the part of cattle owners to sell their animals during rainy months when water and fodder would be available in plenty is not unusual,” Regional Joint Director of Animal Husbandry Department Ravichandran said.

The Indian EXPRESS
JOURNALISM OF COURAGE

Eat barley to keep your heart healthy

Barley is comparably effective as oats in reducing overall risk of cardiovascular disease.

It's time you looked up barley recipes. (Source: Thinkstock Images)

You may want to add barley to your diet as a new study has revealed that it can lower not one, but two types of bad cholesterol associated with cardiovascular risk.

The St Michael's Hospital research paper found that barley reduced both low-density lipoprotein (LDL) and non-high-density lipoprotein (non-HDL), by seven per cent.

The review — which included 14 studies on clinical trials conducted in seven countries, including Canada — also indicated that barley had similar cholesterol-lowering effects as oats, which is often the go-to grain for health benefits.

"The findings are most important for populations at high risk for cardiovascular disease — such as Type 2 diabetics — who have normal levels of LDL cholesterol, but elevated levels of non-HDL or apo B," said research scientist Dr Vladimir Vuksan, adding "Barley has a lowering effect on the total bad

cholesterol in these high-risk individuals, but can also benefit people without high cholesterol."

Despite its benefits, Dr Vuksan said barley is not as well-established as some other health-recommended foods — such as oats. Barley consumption by humans has fallen by 35 per cent in the last 10 years.

Canada is one of the top five world producers of barley — almost 10 megatonnes per year — but human consumption accounts for only two per cent of the crop yield, with livestock making up the other 98 per cent.

"After looking at the evidence, we can also say that barley is comparably effective as oats in reducing overall risk of cardiovascular disease" said Dr Vuksan. He added that barley can be enjoyed in a variety of ways. He recommends trying to incorporate barley into existing recipes, using it as a substitute for rice or even on its own — just like oatmeal.

The study has been published in The European Journal of Clinical Nutrition.

hindustantimes

Govt wants end to big MSP hikes for farmers

The government could move away from large hikes in support prices for farmers, agriculture minister Radha Mohan Singh hinted on Wednesday, signalling a key farm policy shift aimed at rationalising subsidies and taming inflation.

The minister said some people thought the "only way to shore up farmer income is through minimum support prices".

"Wrong. This alone won't do unless farmers diversify their activities into livestock, kitchen gardens, fishery etc. That's our focus," Singh said during a freewheeling web chat with farmers.

MSP is the price set by the government for various farm commodities, which helps boost farmer income by acting as a floor price for private traders. Farmers also tend to focus on those crops which fetch higher MSPs.

Since coming to power, the Narendra Modi government has opted for more moderate MSP hikes overall in a bid to tame inflation. Pulses and oilseeds, two scarce items, have been an exception.

The government has repeatedly stressed its aim to rationalise subsidies and ensure that they reach the target group. Over the past two years, the government has cut down on subsidies in two key sectors, food and education.

Higher MSPs directly feed into inflation. Reserve Bank of India (RBI) data shows a 10% MSP hike raises short-term wholesale inflation by 1 percentage point.

RBI governor Raghuram Rajan on Tuesday kept key lending rates unchanged because he said food inflation was still a worry. Singh said more than MSPs, farmers needed better markets.

He also took a swipe at previous Congress-led regimes saying they focused only on raising support prices for farmers.

“When we say we will double farm income, some of our other friends are amazed because they can’t even think of such a possibility. They can’t differentiate between wheat and mud,” he said.

Economists had greeted the Modi government’s Budget 2016-17 announcement of doubling all agricultural income with caution, saying unless adjusted for inflation, it wouldn’t mean much.

Singh said more than MSPs, farmers needed better markets.

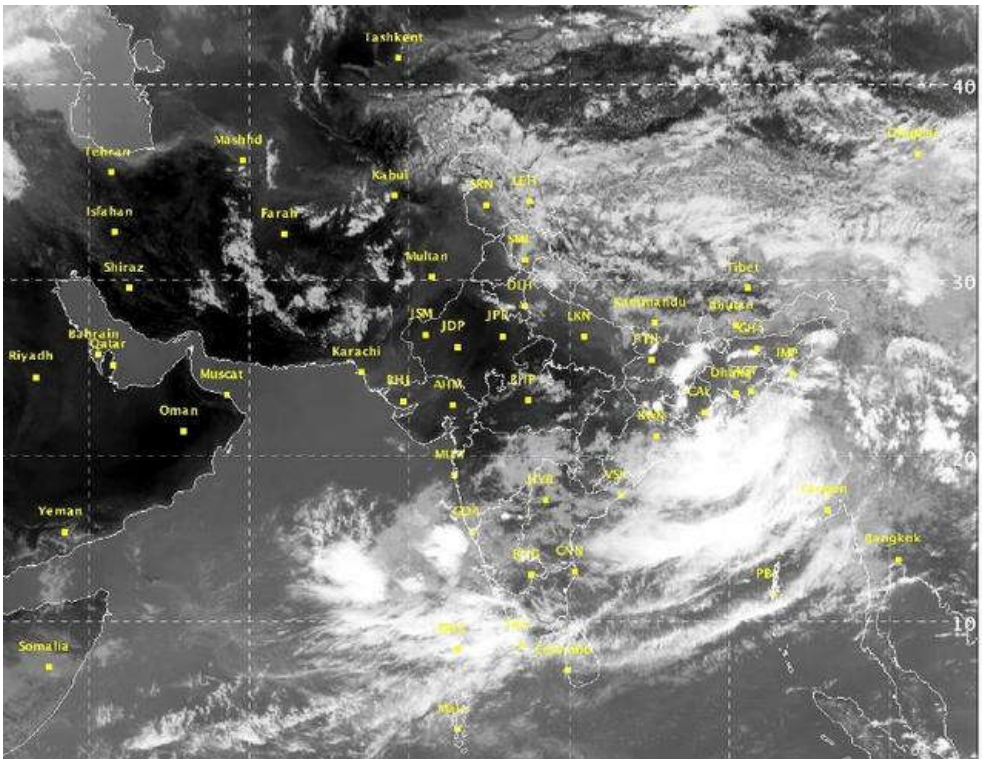
“Earlier nobody wanted to deliver. And it was difficult to deliver because those in power could not distinguish between wheat and mud,” he said repeating his barb.

“Ours is a huge country of 1.2 billion people. India is not Italy. I have been to Italy. Its population is similar to Haryana’s,” the minister said.

He said he was merely referring to the 60% of the country’s arable land that did not have irrigation.

THE HINDU BusinessLine

On day 2, monsoon makes steady progress along West Coast



Insat satellite image at 14.00 IST.

The South-West monsoon has maintained steady progress along the West Coast of the country a day after its onset was declared over Kerala.

The primary atmospheric features that determine the health of the monsoon system are intact, and the prognosis is that they will continue to remain so during this weekend and into the next.

The offshore trough off the Kerala-Karnataka coast persisted and gave a good account of itself in driving heavy to very heavy rainfall over Kerala during the 24 hours ending Thursday morning.

The offshore trough is forecast to be in good shape until June 16, up to which date forecasts are available.

Good spread

Rain occurred at most places in Kerala and Lakshadweep. Heavy to very heavy rainfall reports have come in from Vaikom and Enamackel (12 cm each) Piravom (11 cm); and Nilambur and Kakkanadu (10 cm each) in Kerala.

According to the Met, the monsoon covered the whole of Kerala and Tamil Nadu and most parts of Coastal Karnataka on the second day.

Seasonal rains have also entered more parts of South Interior Karnataka, some parts of Rayalaseema and Coastal Andhra Pradesh.

The northern limit of the monsoon passed through Honnavar, Anantapur and Ongole. Progression of the monsoon indicates that more areas of the peninsula will come under its footprint in quick time.

Rains are expected to cover the whole of Coastal Karnataka, southern parts of Konkan and Goa, North Interior Karnataka, more parts of Rayalaseema and Coastal Andhra Pradesh during the next two days.

An outlook from the Thiruvananthapuram Met office said that heavy (7-11 cm) to very heavy (12-20 cm) rainfall is likely at one or two places in Kerala until Friday morning.

Squally weather

Squally weather with wind speeds reaching 45-55 km/hr and gusting to 60 km/hr is likely along and off the Kerala coast and over Lakshadweep until Friday afternoon. Fishermen have been advised to be cautious.

On Thursday, a cyclonic circulation located off the Karnataka-Goa coast was more or less intact.

Global models have put this under close watch for any signs of intensification.

However, a counterpart circulation in the Bay of Bengal off the Andhra Pradesh and Odisha coasts has weakened.

It has been replaced by a fresh circulation over the North Bay of Bengal and Bangladesh, which might help keep the Bay of Bengal ‘arm’ of the monsoon in contention.

India, UK join hands to study monsoon variability

India and the UK have joined hands to start an observational campaign from June 8 till end-July to better understand small-scale processes that drive monsoon variability and predictability.

The Rs. 50-crore project, the cost of which is being shared by the Ministry of Earth Sciences and the UK Met department, will involve the deployment of UK's BAe-146-301 atmospheric research aircraft with sophisticated scientific instruments and India's Sagar Nidhi and Sindhu Sadhna research ships during May-July, read an official statement.

"Paucity of data at smaller space and time scales have a major effect on the large-scale variability of the monsoon," the Ministry said, adding that better understanding of the smaller scale physical processes will help improve computer simulation models and parameterisation of physical process, which in turn will produce improved monsoon prediction.

This joint effort is part of the implementation agreement signed between the Ministry and Natural Environment Research Council, UK, entailing three research projects.

Scientists trying to tweak photosynthesis to boost rice yields

How does one get a better yield of the paddy? By supercharging its photosynthesis, hope researchers at the International C4 Rice Consortium.

The researchers are trying to make rice plants switch to a more efficient C4 pathway during photosynthesis — the process by which plants produce food — instead of following the usual C3 pathway.

“Photosynthesis is the process by which plants convert carbon dioxide from the atmosphere into sugar using sunlight. In most plants, including rice, carbon dioxide is first fixed into a compound with three carbon atoms. This is commonly referred to as C3 pathway,” said Paul Quick, C4 Rice Centre, International Rice Research Institute (IRRI), Philippines.

C4 photosynthesis involves alterations to biochemistry, leaf anatomy and cell biology and makes the photosynthetic process more efficient. It leads to the formation of a four-carbon compound, thus minimising the loss of carbon dioxide, Quick explained.

But how does this help? In hot summers, particularly in drought-like conditions, there can be a drastic reduction in the carbon dioxide being converted into sugar, due to an energy-intensive process called photorespiration. Plants that

solely depend on the C3 pathway for carbon fixation face negative effects of photorespiration, including the loss of carbon dioxide.

“The C4 pathway has a number of inherent benefits: such as increasing the yield by up to 50 per cent (in C4 plants), doubling water-use efficiency, enhancing nitrogen efficiency by 260 per cent and improving radiation-use efficiency by 50 per cent,” said Quick. He was speaking on the sidelines of a seminar, ‘*Development of C4 Rice: Progress and Prospects*, organised by the Centre for Plant Molecular Biology and Biotechnology, Tamil Nadu Agricultural University.

The TNAU, informed sources say, intends to be one of the many global partners of the consortium in developing C4 rice, an IRRI project that is funded by the Bill and Melinda Gates Foundation.

Incidentally, Quick visited the TNAU facility here to review the capacity and the initial research undertaken by the varsity’s scientists.

An App that tells farmers when to go for sowing

ICRISAT-Microsoft develop solution that analyses massive data to predict the right time

Forget about weather SMSes or marketing tips to farmers over phone. Here's an App-based solution that can tell farmers when to go for sowing.

Sifting massive volumes of data, this App would tell farmers in Andhra Pradesh to pick the perfect sowing week. The advice could vary from farmer to farmer and from village to village.

ICRISAT has teamed up with Microsoft and Andhra Pradesh government to develop this solution. ICRISAT expects this personalised Village Advisory Dashboard (the interface) solve an important problem faced by the small farmers.

"Implementation of advanced analytics in agriculture will help streamline and strengthen farming practices.

The Sowing App and Personalized Village Advisory Dashboard are developed to provide powerful cloud-based predictive analytics to farmers with crucial information and insights. This will help reduce crop failures," Anil Bhansali, Managing Director of Microsoft India (Research and Development), said.

The institute used Microsoft Cortana Intelligence Suite including Machine Learning and Business Intelligence (BI) tools.

It uploaded the data it collected from farms in 13 districts to Microsoft's Azure Cloud. Using BI tools, the dashboard provides important insights into soil health, fertiliser recommendations, and seven days' weather forecast in Telugu.

"The Sowing Application deploys powerful artificial intelligence to interface with weather forecasting models provided by the USA-based aWhere Inc.

It also factors in rainfall data collected over 45 years as well as 10 years of groundnut sowing progress data for Kurnool district," a statement from International Crops Research Institute for Semi Arid Tropics (ICRISAT) said.

The solution would analyse the data to provide predictable and usable data to farmers to pick the ideal sowing week.

"Bringing a lot of scattered data together and developing an analytical tool that is comprehensive and gives accurate predictions to the farmers, is urgently needed.

This is going to boost our digital agriculture initiative in a big way," David Bergvinson, Director-General of ICRISAT, said.

Seed idea: this app tells farmers when to sow

Icrisat-Microsoft develop solution that analyses massive data to predict the right time

Forget about weather SMSes or marketing tips to farmers over the phone. Now, an app-based solution can tell farmers when to sow their seeds. Sifting massive volumes of data, this app will help farmers in Andhra Pradesh to pick the perfect sowing week. The advice could vary from farmer to farmer and from village to village.

Icrisat (International Crops Research Institute for Semi Arid Tropics) has teamed up with Microsoft and the Andhra Pradesh government to develop this solution. Icrisat expects the personalised Village Advisory Dashboard (the interface) will solve a key problem faced by the small farmers.

“The Sowing App and Personalised Village Advisory Dashboard are developed to provide powerful cloud-based predictive analytics to farmers. This will help reduce crop failures,” said Anil Bhansali, MD, Microsoft India (Research and Development).

The institute used Microsoft’s Cortana Intelligence Suite, including Machine Learning and Business Intelligence (BI) tools. It uploaded the data collected from farms in 13 districts to Microsoft’s Azure Cloud.

Using Business Intelligence tools, the dashboard provides important insights into soil health, fertiliser recommendations, and a seven-day weather forecast in Telugu.

“The sowing application deploys powerful artificial intelligence to interface with weather forecasting models provided by the USA-based aWhere Inc. It also factors in rainfall data collected over 45 years as well as 10 years of groundnut sowing progress data for Kurnool district,” said an Icrisat statement.

The solution will analyse the data to provide predictable and usable data to farmers to pick the ideal sowing week.

Cashew exports continue to slide

Cashew exports from the country continued to show a declining trend with 28 per cent fall during April-May this year in terms of volume and 19 per cent in value.

Total shipments during the first two months of the current fiscal dropped to 11,044 tonnes valued at 607.27 crore from 15,338 tonnes valued at 749.57 crore in the corresponding period last financial year, according to Cashew Export Promotion Council of India (CEPCI).

The unit value increased this fiscal to 549.88 a kg from 488.70 in April-May 2015, they said.

Meanwhile, fall in the unit value of Cashew Nut Shell Liquid (CNSL)/Cardinol is said to have raised their exports to 2,257 tonnes valued at 8.23 crore from 1,679 tonnes valued at 9.80 crore. The unit value realised fell to 36.47 a kg from 58.36, CEPCI sources said.

Attributing the consistent fall in exports mainly to non-receipt of parity price for kernel, Sundaram Prabha, Chairman, CEPCI, told *BusinessLine* that high Raw Cashew Nut (RCN) prices coupled with closing down of around 80 per cent of the factories in Kerala following a hike in wages are also responsible for the fall.

However, imports of raw cashew nuts dropped during April-May this year to 85,140 tonnes valued at 697.99 crore from 1,74,448 tonnes valued at 1,372.68 crore in the same period last fiscal.

The unit value of RCN was at 81.98 as against 78.69.

According to Pankaj N Sampat, a Mumbai-based dealer, the RCN prices have come down from the peaks of April 2016 but are still high compared to 2015 average and much higher than 2014 average.

Notwithstanding any significant decline in kernel prices cannot be expected to happen although we might see a dip from current levels when supplies would pick up in 3rd quarter.

The slip might be large because the high price paid for RCN will not allow shellers to sell at much lower levels, he pointed out.

As RCN arrivals into India and Vietnam are picking up from May, shellers will need to keep selling on a regular basis, he added.

Mixed trend in edible oils

Edible oils market ruled mixed on back of nominal demand amid stable futures. On the BCE, groundnut and rapeseed oil gained by 20 and 10 per 10 kg each on firm reports from producing centres. Soyabean, sunflower and cotton refined ruled unchanged.

Palmolein lost 1. Liberty was quoting palmolein at 585, super palmolein 595, soyabean refined oil 644. Allana traded palmolein for 586, soya refined oil 638 and sunflower refined oil at 740. At Rajkot, groundnut oil *telia* tin rose further by 40 to 1,940 and loose (10 kg) increased by 25 to 1,250.

Business Standard

Food prices zoom on monsoon delay, scarcity

Food prices have flared up over declining output after two years of drought and with new arrivals still a few months away.

Reports of the monsoon being delayed have added to market jitters. Government price-control measures in sugar and pulses have not helped much.

Sugar, pulses and wheat have seen a decline in production from the previous season and traders are estimating an output lower than the government's earlier projections.

Pulses, wheat, milk, sugar and oilseeds are 10-21 per cent costlier since May, when the first monsoon forecast was issued by the India Meteorological Department.

The monsoon arrived in the southern coast with a week's delay.

"A delayed monsoon arrival could lead to lower sowing area, delayed sowing, and low crop productivity," said Ajitesh Mullick, associate vice-president, retail research, Religare Commodities.

The Reserve Bank of India said in its latest monetary policy that the upsurge in inflation in April was led by food and commodity prices.

Inflation based on wholesale prices rose 0.34 per cent in April against a 0.85 per cent decline in March.

Inflation based on retail prices rose to 5.39 per cent in April from 4.83 per cent in March.

COSTLY BITE

Commodity	Jun 8, 2016*	Chg (%) 1-mnth	Chg (%) y-o-y
Soya oil	85	21.43	4.94
Chana, New Delhi#	6,532	18.33	41.66
Moong dal	110	15.79	0.00
Urad dal	150	15.38	54.64
Maize, Gulab Bagh#	1,393	12.79	24.26
Groundnut oil	135	12.50	22.73

*₹/kg; #NCDEX future prices in ₹/quintal
Sources: NCDEX, Dept of Consumer Affairs
Compiled by BS Research Bureau

"The impact of an expected improvement in the monsoon on food inflation is likely to be felt in the second half, once produce reaches markets.

Crops with lower irrigation coverage and, thus, higher monsoon sensitivity, such as pulses, are likely to pull food inflation lower," said Kanika Pasricha, an analyst with Standard Chartered Bank.

Most food prices in India are firming up in tandem with global markets.Short supply and higher seed demand from farmers have hoisted groundnut oil prices to a two-year high.

The price has reached Rs 2,130 per 15 kg and could touch Rs 2,500 in the next two months.

"Farmers are buying groundnut for sowing, which has caused a shortage for crushing mills. Prices will continue to firm up," said Ravji Mandanaka, president of the Gondal Oil Mills Association.

Pulses prices have jumped 16 per cent since May, despite several measures by the government to restrict the spike.

Moong, urad, gram and masoor have been climbing for around five weeks on a sustained rise in demand. “Pulses production has been lower this year globally. Prices are rising across the world.

Since the next crop is expected to arrive after four months, there is unlikely to be any respite,” said Bimal Kothari, vice-chairman of the India Pulses and Grains Association.

Sugar prices in the wholesale market have almost doubled on low production from a recent bottom of Rs 1,900 a quintal last September.

Raw sugar futures for delivery in July on the Inter-Continental Exchange have risen 35 per cent since mid-April on concerns of tightening global supply.

This makes exports attractive at a time when the government is trying to control retail prices around Rs 40 a kg.

Microsoft, Icrisat develop new sowing app for farmers using Al and Azure cloud

The app advises farmers on best time to sow crops depending on weather conditions, soil and other indicators

A new sowing app for farmers combined with a personalised village advisory dashboard for Andhra Pradesh has been developed by Microsoft India in collaboration with International Crops Research Institute for Semi-Arid Tropics (Icrisat).

The sowing app advises farmers on the best time to sow crops depending on weather conditions, soil and other indicators.

Icrisat has adopted Microsoft Cortana Intelligence Suite including Machine Learning and Power BI or Business Intelligence, to empower farmers and government officials with technology, and promote digital farming practices in the state.

According to Microsoft India (R&D) Private Limited managing director Anil Bhansali, the sowing app and personalised village advisory dashboard are developed to provide powerful cloud-based predictive analytics to empower farmers with crucial information and insights to help reduce crop failures and increase yield, in turn, reducing stress and generating better income.

"This is a significant start for digital agriculture and can reap benefits in multiple ways as governments and stake holders discover the potential

for technology to unlock and offer multiple solutions for farmers, "Bhansali said.

This has been made possible through a partnership between the Icrisat, Microsoft and the Andhra Pradesh government.

"Bringing a lot of scattered data together and developing an analytical tool that is comprehensive and gives accurate predictions to the farmers, is urgently needed. We are excited to work with Microsoft to enhance incomes and improve the lives of small holder farmers, and this is going to boost our digital agriculture initiative in a big way," said David Bergvinson, director general of Icrisat.

The personalised village advisory dashboard has been especially developed to enable officials of Andhra Pradesh Primary Sector Mission (APPSM) - Rythu Kosam, to better manage programs of scale.

The sowing app utilises powerful artificial intelligence to interface with weather forecasting models provided by US based aWhere Inc. and extensive data including rainfall over the last 45 years as well as 10 years of groundnut sowing progress data for Kurnool district.

This data is then downscaled to build predictability and guide farmers to pick the ideal sowing week.

Similarly, the Personalised Village Advisory Dashboard developed by Microsoft provides an instant overview across several environmental factors that determine a healthy crop yield.

In the pilot that has been recently launched, information will be sent to farmers about the sowing date via SMS in Telugu.

Data collected manually from farms in 13 districts of the state by Icrisat field officers for Rythu Kosam has been uploaded to Microsoft's Azure Cloud.

Using powerful Business Intelligence (BI) tools, this dashboard provides important insights around soil health, fertilizer recommendations, and seven days' weather forecast.

Groundnut shortage may push oil prices to new high

Oil price has reached Rs 2,130 per 15 kg and may touch Rs 2,500 in the next two months

Short supply and higher seed demand from farmers has led to the price of groundnut oil rising to a two year high. Oil price has reached Rs 2,130 per 15 kg and may touch Rs 2,500 in the next two months.

According to groundnut oil millers, as groundnut production was short last year, mills have been facing shortage of groundnut for crushing. Added to that, groundnut oil exports in consumer packs have increased this year, pushing groundnut oil prices since the last two months. During June alone, groundnut oil prices grew by Rs 150 per kg.

"Currently, farmers are buying groundnut in big quantities for sowing, which has resulted in shortage for crushing. As a result, groundnut oil prices have gone up and will continue to firm in coming time," said Ravji Mandanaka, president of Gondal Oil Mills Association.

Benchmark prices of groundnut oil (loose) have reached Rs 1,250 per 10 kg, having increased by Rs 75 per 10 kg in June and Rs 15 per 10 kg in the past two months. In retail, a new 15 kg tin of groundnut oil is being traded at Rs 2,130, having gained by more than Rs 300 per 15 kg tin during the current month in the retail market.

The other reason for the constant rise in groundnut oil prices is attributed to good export demand during March and April which was unexpected. Exporters have contracted about 15,000 tonnes export order from China in March this year.

Suresh Kaneriya, managing director of Kaneriya Oil Industries, said: "A sudden spurt in export demand for groundnut oil has pushed up prices since the last two months. Moreover, because of weak production of Kharif groundnut has created scarcity of raw material for mills. While arrivals are short, most of the stock is consumed by the farmers."

Gujarat government has already stepped in to control prices. Recently, the state government reviewed groundnut oil prices and planned to check stocks with traders and millers.

"Mills have no stocks of groundnut as prices are unaffordable. Many of the groundnut mills in Gujarat have closed since the last three or four months due to lack of supply," said Mandanaka.

There are about 200 groundnut oil mills in Gujarat. Currently, only 30 mills are operation partially.

THE TIMES OF INDIA

Global consultants to assist AP farmers

The state government is planning to rope in world renowned firms to help ryots streamline operations and make farming profitable. The consulting firms will assist farmers in all stages, right from sowing seeds to marketing produce. Extending weather inputs, insights in controlling pests and seasonal viruses would also be part of the consulting firms' job.

The chief minister released the annual credit plan of the state here at the state level bankers committee (SLBC) meeting on Thursday. "We do not want farmers to earn mere remunerative prices. Each season should be profitable," said chief minister N Chandrababu Naidu, while elaborating on the plans to hire global giants to make agriculture profitable.

The CM said negotiations with 25 top global consultants are underway. "We will bring farming experts. They will facilitate the farmers right from tilling the fields to sale of produce. We want the farmer to make big profits," Naidu said.

He explained that hiring consultants would revolutionize the agriculture sector in the state. The government will take steps to provide water (irrigation) to each and every farmer in the state, said the CM. The state would also guide the farmers on the usage of fertilizer after referring to soil reports. Naidu said the government is taking steps to encourage setting up of agro-product industries, which will help promote the farmers' produce.

The CM asked bankers to shun the traditional path of granting credit to farmers and instead adopt a scientific approach. He said the role of bankers is very important to reach the planned growth rate of 15 per cent in AP. "Ground water, rainfall, environment, pollution are necessary components to get good yields. We will guide the farmers with real time analysis," he said.

The CM directed the bankers to liberally grant loans to the fisheries sector, as export of marine products are a major source of income for the state.

He said the government has developed nearly 175 industrial clusters across the state and that bankers should target these clusters in their credit plan to propel growth.

SLBC chairman and Andhra Bank managing director Suresh N Patel said AP is one of few states which has provided such huge loans to the agriculture sector in the last financial year.

He said the credit plan for 2016-17 has been designed with Rs1,65,538 crore, which is an increase of nearly 32 per cent.

The priority sector credit inflow would see a jump of 30 per cent as the bankers spared Rs1,25,538 crore. Agriculture sector alone would get Rs83,003, which was Rs75,448 crore last year.

While Rs60,000 crore would be granted as short term (ST) loans, the remaining Rs23,003 crore would be spared as long term loans in agriculture sector.

While dairy development was allocated loan of Rs5,536 crore, poultry sector got Rs1,299 crore.

Fisheries sector was granted Rs1,713 crore credit. Sheep and goat breeding was allocated loan of Rs1,223 crore.

"We have dedicated nearly Rs25,000 crore for Mudra loans for MSME sector," said Suresh N Patel.

Bankers would also assist the housing program with an outlay of Rs12,000 crore from which Rs7,340 crore would be dedicated to Prime Minister Awas Yojana (PMAY).

Students would get loans to the tune of Rs2,155 crore to pursue higher education. Agriculture minister Prattipati Pullarao, HRD minister Ganta Srinivasa Rao were also present.

ICRISAT, Microsoft develop sowing app for Andhra farmers

ICRISAT in partnership with Microsoft has developed a new sowing application for farmers combined with a personalised village advisory dashboard for Andhra Pradesh .

These applications are expected to help farmers cope with the climate change and bring radical improvements for small-holder farmers in the state.

The sowing app is to help farmers achieve optimal harvests by advising on the best time to sow crops depending on weather conditions, soil and other indicators.

This has been made possible through a partnership between the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Microsoft and the Andhra Pradesh government.

"Bringing a lot of scattered data together and developing an analytical tool that is comprehensive and gives accurate predictions to the farmers, is urgently needed.

We are excited to work with Microsoft to enhance incomes and improve the lives of small holder farmers, and this is going to boost our digital agriculture initiative in a big way," said David Bergvinson , Director General of ICRISAT.

ICRISAT has adopted Microsoft Cortana Intelligence Suite including Machine Learning and Power BI or Business Intelligence , to empower farmers and

government officials with technology, and promote digital farming practices in the state.

The Sowing App and Personalized Village Advisory Dashboard are developed to provide powerful cloud-based predictive analytics to empower farmers with crucial information and insights to help reduce crop failures and increase yield, in turn, reducing stress and generating better income," said Anil Bhansali , Managing Director of Microsoft India (R&D) Pvt. Ltd.

The sowing application utilizes powerful artificial intelligence to interface with weather forecasting models provided by US-based aWhere Inc. and extensive data including rainfall over the last 45 years as well as 10 years of groundnut sowing progress data for Kurnool district.

This data is then downscaled to build predictability and guide farmers to pick the ideal sowing week.

When combined with other data collected from the Rythu Kosamproject, it can create rich datasets that can be processed to build predictive models for the farmers, said ICRISAT in a statement.

Similarly, the personalized village advisory dashboard provides an instant overview across several environmental factors that determine a healthy crop yield.

In the pilot that has been recently launched, information will be sent to farmers about the sowing date via SMS in Telugu.

Data collected manually from farms in 13 districts of the state by ICRISAT field officers for Rythu Kosam has been uploaded to Microsoft's Azure Cloud.

Using powerful Business Intelligence (BI) tools, this dashboard provides important insights around soil health, fertilizer recommendations, and seven days' weather forecast derived from the world's best available weather observations systems and global forecast models.

This data is then downscaled for the highest possible accuracy at the village level, to transform how small holder farmers tackle climate change to drive effective decision-making.

ICRISAT is providing technical backstopping to Rythu Kosam, which is aimed at positioning the state among the best three performing states by 2022.

THE ECONOMIC TIMES

Despite arrival of monsoon, soyabean farmers not keen on increasing acreage for crop

The country generally imports around 14.5-15 million tonnes of edible oil to meet its domestic consumption which is around 20 million tonnes annually.

Even though the arrival of monsoon has brought some relief to farmers after two back-to-back droughts, soybean farmers of Madhya Pradesh, Maharashtra and Rajasthan are not too keen on increasing the acreage for their crop which stood at 110.65 lakh hectares during last year's kharif season.

Instead, they are trying to increase productivity of soybean by 20% per hectare for a better crop size. Some farmers are planning to shift to other crops such as pulses which had given better returns last year.

"Last year, farmers faced a dry spell during the sowing season which was followed by heavy rains during the harvesting period between September and October. The erratic weather conditions had impacted the kharif crop in 2015.

Farmers are still worried about the late rains. That's why some may shift from soybean to some other kharif crop this year," said DN Pathak, executive director, Soybean Processors Association of India (SOPA). During the 2015 kharif season, production of soybean was around 69.29 lakh tonnes, compared with 87.1 lakh tonnes in 2014.

"This year, farmers are aiming to increase the yield by at least 20% for a better crop size. Generally, per hectare production is 980-1000 tonnes. We are aiming to increase it to 1,200 tonne per hectare," said Mahesh Rajput, a farmer from Indore, Madhya Pradesh. An increase in crop size will help the country reduce its import bill on account of edible oil.

The country generally imports around 14.5-15 million tonnes of edible oil to meet its domestic consumption which is around 20 million tonnes annually.

Due to a drop in crop size, farmers are getting better price for their produce. Soybean prices are up 7% than what they were a year ago. At present, a tonne of soybean is fetching a price of Rs 3950 while in June last year, the price was Rs 3700 per quintal.

BV Mehta, executive director, Solvent Extractors' Association of India (SEA), feels that there will be some marginal drop in acreage of soybean. "It may be 5%-10% maximum. But we do not see a significant chunk of soybean farmers shifting to some other crop," he added.

Microsoft, Icrisat team up with Andhra Pradesh government on sowing app for farmers

The sowing app and the personalised village advisory dashboard were developed to provide powerful cloud-based predictive analytics to empower farmers.

HYDERABAD: Microsoft, Icrisat and Andhra Pradesh government have developed a sowing app to advise farmers on time to sow crops based on weather conditions, soil and other indicators with personalised village advisory dashboard to help farmers achieve optimal harvests.

In a statement on Thursday, International Crops Research Institute for the Semi-Arid Tropics (Icrisat) said the pioneering digital tools with personalised village advisory dashboard were developed to enable AP officials to better manage programs of scale.

Icrisat's Director General Dr David Bergvinson said, bringing a lot of scattered data together and developing an analytical tool that was comprehensive and gives accurate predictions to the farmers, was urgently needed.

"We are excited to work with Microsoft to enhance incomes and improve the lives of small holder farmers, and this is going to boost our digital agriculture initiative in a big way."

The sowing app and the personalised village advisory dashboard were developed to provide powerful cloud-based predictive analytics to empower farmers with crucial information and insights to help reduce crop failrues and increase yield, which in turn reduces stress and generates better incomes, said Managing Director or Microsoft India (R&D), Anil Bhansali.

"This is a significant start for digital agriculture and can reap benefits in multiple ways as governments and stakeholders discover the potential for technology to unlock and offer multiple solutions for famers," said Bhansali.

The sowing application utilizes powerful artificial intelligence to interface with weather forecasting models provided by the US- based aWhere Inc and extensive data including rainfall over the last 45 years and 10 years of groundnut sowing progress data for Kurnool district of AP. The data was then downscaled to build predictability and guide farmers to pick the ideal sowing week.

FCI inks pact with Adani Group for construction of 2 silos

Adani Agri Logistics will construct silos at Kotkapura in Punjab and Katihar in Bihar in the next two years, a senior government official said.

NEW DELHI: State-run Food Corporation of India (FCI) has entered into an agreement with Adani group for construction of two silos to store wheat, at an estimated cost of about Rs 80 crore.

The two silos would have a combined storage capacity of 75,000 tonnes.

As part of the agreement, Adani Agri Logistics will construct silos at Kotkapura in Punjab and Katihar in Bihar in the next two years, a senior government official said.

The silos will be designed, built, financed and operated by the private partner while it will be owned by the FCI.

FCI, the government's nodal agency for procurement and distribution of foodgrains, would provide guarantee of rentals for 30 years, the official added.

The silo at Kotkapura would be of 25,000 tonne capacity and will require an investment of about Rs 35 crore, while the other silo at Katihar would have a capacity of 50,000 tonnes to be built at a cost of about Rs 45 crore, a source said.

A silo is a steel structure, comprising large size cylindrical shape bins normally each with a capacity of about 12,500 tonnes, where grains can be stored without jute bags for longer duration.

FCI will provide the rent assurance for 30 years. For the first year the rate is fixed at Rs 97 per tonne per month. The rates will keep on revising based on the predecided formula, the source added.

At present the total storage capacity under silos is about 10 lakh tonnes. Out of which 5.5 lakh tonnes is with FCI and remaining is with state-agencies.