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THE HINDU

Forage crops which are still popular among dairy farmers

Among the forage varieties /hybrids released by the Tamil Nadu Agriculture University, Coimbatore varieties like Cumbu Napier hybrid CO (CN) 4, Guinea grass CO (GG) 3, Multicut fodder sorghum CO (FS) 29 and Lucerne CO 1 are still popular among the farmers of Tamil Nadu and neighbouring states.

These varieties have heralded a new era in fodder research and development at the National level. The varieties are a boon for dairy farmers of Tamil Nadu, Kerala, Andhra Pradesh, Karnataka and Maharashtra.

Cumbu napier hybrid

The stem of Cumbu Napier Hybrid grass CO (CN) 4 is ultra soft, less fibrous with sugary juice, making it more palatable. A white powdery coating on the stem is visible. The tillers are numerous and grow faster. It has large leaves, softer and less persistent hairs on leaf blades and sheaths and leaf edges are not very sharp.

The leaf-stem ratio is higher. As the palatability is very high, milch animals such as cattle, sheep and goats relish the fodder with least rejection. The variety registered a yield of 382 tonnes per hectare a year which is 32.9 per cent increased yield over the CO 3 variety. A total quantity of 1,07,03,873 stem cuttings has been distributed across India spreading over 15 states during 2008 to 2014.

Guinea grass CO (GG) 3

The Guinea grass CO (GG) 3 is a clonal selection from Mombasa. It has good seedling vigour with profuse tillering. It has large and long leaves with high leaf stem ratio. Sheep, goats and pigs relish the fodder without rejection. It had registered a yield of 320 tonnes per hectare which is 18.5 per cent increased green fodder yield over the CO 2 variety.

Sorghum, the foremost important forage crop in India followed by Berseem and Lucerne is cultivated mainly in western UP, Haryana, Punjab, Rajasthan, Tamil Nadu and Delhi and fulfils over two-third of the fodder demand during Kharif season.

This variety, first of its kind in India, was released more than a decade back from the department of forage crops.

It was released during 1980 and yields 80-90 tonnes in a year from a hectare. A maximum of 12 harvests can be made annually at intervals of 30 days.

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A new concept called ecological engineering to reduce pests



Erode district alone has 32,000 hectares under paddy cultivation. The district runs across the Cauvery and Bhavani river basin.

Due to unfavourable climatic conditions pest infestation such as rice stem borer, leaf folder, ear head bug, gall midge, rice thrips — all common in

paddy cultivation — create havoc every season leading to nearly 30 per cent yield loss.

Many farmers mostly rely on chemical pesticides (insecticide and fungicide) for managing both pests and infestations. If they are advocates of organic farming then they use bio pesticides to keep the menace under control.

Biodiversity

Presently a new technology called Ecological engineering for pest management has been introduced by National Institute of Plant Health Management (NIPHM), Hyderabad to aid farmers maintain the biodiversity and keep pests under control while at the same time maintaining the paddy eco-system.

Since in southern Tamil Nadu, it is season for paddy cultivation efforts are currently in progress to popularise this concept for promoting bio-intensive integrated pest management method.

The technology trial was adopted in Singiripalayam village and Mr. Karthikeyan, a paddy farmer who adopted this technology in his field, says:

“Due to excessive pesticide use farmers like me often encountered environmental problems. The soil health also got deteriorated. I find the new technology encouraging, since there is a 45 to 50 per cent reduction in pest population.

“I have also observed natural predators on pests like damsel fly, praying mantises and spider population have increased in my field.”

The specialist team conducted an analysis to study the pest defender ratio for plant health and found that the natural enemies are able to maintain the pest population which are infesting the paddy crop.

Natural predators

“In normal situation we use to go for chemical spray, sometimes even three to four sprays to control pests and diseases. By adopting this technique no chemical spray is required. Natural enemies which prey on the pests are allowed to flourish in the fields. By adopting this method I could save nearly Rs.5,000 for a hectare towards the cost of purchase of chemical pesticides during one cropping season,” says Mr.Haridas another farmer. The trial has

been implemented for different crops such as blackgram, cowpea, green gram, mustard, sesame, marigold, tulsi, castor and sunflower and found effective.

The Kendra initiated a capacity building programme for farmers in the district and on farm training was given on production of bio-control agents and bio-pesticides to ensure the timely availability of bio-inputs at the farmer level.

Community approach

“A collective approach by the farming community on adoption of this technology will not only suppress the pest population but also enhances the soil health through organic bio-fertilizer utility.

“About 25 farmers from Andhipalayam village near Gobichettipalayam and 30 farmers from Kallipatti in T.N.Palayam block have been initiated into this concept,” explains Dr. P. Alagesan, Programme Coordinator, Myrada Krishi Vigyan Kendra,, Gobichettipalayam, Erode.

A three days field training was organized for the farmer club members, to get first hand information on this approach and an exposure visit was organized by National Institute of Plant Health Management (NIPHM), Hyderabad for a week.

In both the villages, farmers are collectively involved in the production of bio-inputs, predators and parasites for managing the pest population.

Pesticide free

The community approach on this ecological engineering is expected to bring the region as pesticide free zone and enhance the soil microbial activity in the paddy eco system. Plans are on to introduce this method in other crops like cabbage, cotton and groundnut in the coming season.

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Forests trump card in efforts to end global hunger



The world's forests have great potential to improve the nutrition and ensure livelihoods of the people across the world, said researchers. .

About one in nine people globally still suffers from hunger with the majority of the hungry living in Africa and Asia.

The report released by the International Union of Forest Research Organisations (IUFRO) also underlines the need for the most vulnerable groups of society to have secure access to forest foods. "Forest foods often provide a safety net during periods of food shortages," said Bhaskar Vira from the University of Cambridge.

"In the study, we reveal impressive examples which show how forests and trees can complement agricultural production and contribute to the income of local people, especially in the most vulnerable regions of the world," noted Vira, chair of the Global Forest Expert Panel on Forests and Food Security, which compiled the report.

Tree foods are often rich in vitamins, proteins, and other nutrients and are associated with more diverse diets.

Wild meat, fish, and insects are also important forest food sources. Insects are an especially cheap, abundant source of protein, fat, vitamins and minerals. Forests are also essential for firewood and charcoal. In developing countries, 2.4 billion households use these renewable biofuels for cooking and heating.

Thus, in India and Nepal even better-off rural households depend on wood-fuels. Close to one out of six persons directly depends on forests for their food and income.PTI

Smartphone-based courses from KVASU

The Kerala Veterinary and Animal Sciences University (KVASU) is preparing to launch smartphone-based courses, the first such initiative in the country, this academic year.

The School of New Media and Research of the varsity is planning to launch three months' certificate courses in organic farming and dog care and management based on Android smartphones, T.P. Sethumadhavan, Director of Entrepreneurship who has initiated the project, said.

Dr. Sethumadhavan said those who had passed SSLC could join the courses, irrespective of age. The content of the courses would be available both in English and Malayalam. Those who enrolled could learn through smartphones, and evaluation too would be done through it.

KVASU expected more than 10,000 potential learners to enrol in the first batch under the programme, he said.

B. Ashok, Vice Chancellor, KVASU, said smartphone-based courses envisaged learners to access information through mobile applications which could share knowledge and deliver content in a user-free manner.

Dr. Ashok said organic farming was emerging as a viable farming system for clean, green and ethical food production. However, awareness of organic farming was limited. The course would pave the way for popularising the concept of organic farming in the State. At a time when pet animal rearing was acquiring momentum, courses on dog care and management would create awareness of the importance of pet animal rearing and animal welfare among the stakeholders, he said.

Recently, the university joined the global consortium on ‘One agriculture and One Science’ for disseminating appropriate agri-based content to the stakeholders. KVASU would associate with Edinburgh and Reading universities in the U.K. and Sydney University in Australia for further advancements in the sector, Dr. Ashok said.

Kollam panchayat to grow vegetables for Onam

A meeting of the district panchayat committee on Wednesday decided to cultivate organically grown vegetables for Onam on 100 acres of the Government Agricultural Farm at Anchal.

District Panchayat president S. Jayamohan said that the aim is make the people of the district less dependent upon imported vegetables with high pesticide content.

He said that for Onam last year, organically grown vegetables were cultivated in 30 acres on the same farm and kits containing 10 vegetables were sold to more than 8,000 families.

This year the cultivation will be carried out through the Mahatma Gandhi National Rural Employment Guarantee Scheme.

A meeting with agricultural officers in the district will be held at the Anchal farm on Thursday to chart out the project for the purpose.

Mr. Jayamohan said that the district panchayat also has plans to produce and market organic fertilizers to the vegetable farmers.

On May 13, a vending machine for vegetable seeds will start operating from the Bishop Jerome Nagar commercial complex in the city. The seeds are those produced at the Anchal farm.

Development Standing Committee chairman of the district panchayat Biju K. Matthew said that organic farming of vegetables for the market will be made a permanent feature at the Anchal farm.

Under this project five vegetable stalls will be opened in the district. The stalls will be at Anchal, Kadakkal, Kottarakara, Karunagapally and Kollam city.

He said that five years ago only 7 per cent of farm land traditionally set up for vegetable farming was used. At present the utilisation has crossed 90 per cent.

Mr. Jayamohan said that a corps of farm labourers christened Samridhi has been created by the district panchayat.

The members have been given scientific training for the purpose. The passing out parade of the corps will be held next week and their services can be utilised right from preparing the land for cultivation to harvesting.

Haritha Bhavan, yet another ambitious programme of the district panchayat will be launched on June 5, the World Environment Day. Under this project saplings of three different vegetables will be distributed to all houses in the district. Mr. Jayamohan also said that a super speciality veterinary hospital at Kollam will be commissioned this month.

Treading the organic path, in all earnest



The race of the Kozhikode North constituency to become the best organic farming Assembly segment in the State began with a seminar for different stakeholders of the project at the Government Vocational Higher Secondary School for Girls, Nadakkavu here, on Wednesday.

Agriculture Minister K.P. Mohanan, in October last, had announced Rs.10 lakh for the best organic farming constituency in the State as part of the

government's efforts to promote the practice in all the constituencies, before Kerala would be declared a fully organic State by 2016. The prospects of an Assembly constituency with a predominantly urban population in a competition involving agricultural activities is perceived to be relatively grim. "But we have decided to race against such conservative notions by motivating the urban residents and farmers' groups in our constituency in a systematic way," said A. Pradeepkumar, MLA, who is leading the campaign in the constituency.

Active groups

"In fact, we stand a good chance since we have many active groups of organic farmers in different parts of the constituency," he said.

More than 70 persons, including Corporation councillors, residents' association representatives, and members of different organic farmers' collectives, attended the seminar, which was aimed at providing an initial training for stakeholders. Retired Agriculture joint director P. Vikraman led the morning session. He dispelled their apprehensions and clarified doubts regarding the success of organic farming given urban constraints.

In the first phase of the project, farmers and residents will be asked to focus on cultivate vegetables, said Assistant Director of Agriculture S. Sheela. She told the seminar that there was no scope for anxiety about the future of organic farming in any part of the State. "There are enough advanced methods to practice farming in successfully way using organic seeds, fertilisers, and pest control techniques," she said. "Even advanced techniques such as precision farming can be practised organically," she said.

Mr. Pradeepkumar said that an elaborate action plan was being prepared for the project. "A committee will also be formed to effectively supervise the progress of the project," he said.

U.S. farmers to use RMAX drones to spray crops



A drone large enough to carry tanks of fertilisers and pesticides has won rare approval from federal authorities to spray crops in the United States, officials said on Tuesday.

The drone, called the RMAX, is a remotely piloted helicopter that weighs 94 kilograms, said Steve Markofski, a spokesman for Yamaha Corp. U.S.A., which developed the aircraft.

Smaller drones weighing a few pounds had already been approved for limited use to take pictures that help farmers identify unhealthy crops. The RMAX is the first time a drone big enough to carry a payload has been approved, Mr. Markofski said.

The drone already has been used elsewhere, including by rice farmers in Japan. The FAA approved it for the U.S. on Friday.

The drone is best suited for precision spraying on California's rolling vineyards and places that are hard to reach from the ground or with larger, piloted planes, said Ken Giles, professor of biological and agricultural engineering at the University of California, Davis.

Relief scheme for farmers to be launched tomorrow

The Delhi Government will start distribution of cheques on Friday for farmers whose crops were destroyed during the recent unseasonal rains. The

distribution will begin from Bawana. The relief scheme has been named after Gajendra Singh, the farmer from Rajasthan, who died during the Aam Aadmi Party rally here on April 22.

Chief Minister Arvind Kejriwal will launch the scheme, titled Gajendra Singh Kisan Sahayata Yojana, at Bawana in north-west Delhi on Friday afternoon. The Delhi Cabinet had on May 1 approved the scheme's name as well as a formula for payment of compensation to the farmers.

According to official sources here on Wednesday, farmers whose complete crop had been destroyed will be paid Rs.20,000 per acre of land. This amount of compensation will be applicable to all cases of crop loss of 70 per cent and above.

In cases where the crop loss was assessed below 70 per cent, the farmers will get a minimum compensation of Rs.14,000 per acre. The compensation has thus been divided into two slabs of Rs.20,000 per acre and Rs.14,000 per acre.

Any dispute arising between the government officials and farmers on the quantum of crop loss will be resolved in the respective Gram Sabha nearest to the land of the affected farmers.

The sources said the compensation scheme was for farmers alone and corporate entities owning land in the Capital would not get the scheme's benefit.

Summer showers help gingelly farmers

Timely summer showers during mid-April have come as a boon to gingelly farmers of Lalgudi block and harvest of the crop has picked up in various pockets since Sunday.

Farmers said that though the rain coincided with the pre-flowering season it has facilitated rich growth of the plant.

An estimated 3,000 acres have been brought under the crop mainly in and around Anandhivedu, Koohour, Santhamangalam, Nanninmangalam, Anbil, Ariyur, Edaiyatrumangalam, Patchampettai, Mayilarangam and Tirumanamedu.

R. Ravisankar of Anandhimeedu says that the average yield per acre stood at four bags each of 75 kg. Traders marketed the produce at the Gandhi Market in Tiruchi. “We can market the produce without any hitch this season,” says Mr. Ravisankar. There has been a growing demand for gingelly in the recent years.

V. Parthiban, a farmer of Pinnavasal, said though he anticipated some marginal profit, the current showers had enabled gingelly farmers realise fair profit. The summer rain, spread over a couple of days, caused some damage to the crop in his fields. Presently, the produce is sold at Rs. 7 a kg.



Depression does lead to fuzzy thinking

If you are depressed and feel that your thinking ability has become “fuzzy” or less sharp, you are right.

A new study has shown that the effect is indeed real, adding that this condition falls in the category of mood disorders.

For the study, researchers from the University of Michigan’s medical school and depression centre analysed 612 women.

Over two-thirds of them had experienced either major depression or bipolar disorder.

Seen as groups, women with depression or bipolar disorder did equally badly on the test, which required sustained concentration.

The test asked them to react rapidly when certain letters flashed briefly on a screen amid a random sequence of other letters.

Compared with the group with no mental health conditions, the groups with either diagnosis lagged noticeably on this standard test of cognitive control.

On the brain scans, the researchers found that the women with depression or bipolar disorder had different levels of activity than healthy women in a particular area of the brain called the right posterior parietal cortex.

In those with depression, the activity in this area was higher than in healthy individuals, while in those with bipolar disorder it was lower.

The area where the differences were seen helps control “executive function” – activities such as working memory, problem solving and reasoning.

“The results could transform the way doctors and patients think about, diagnose and treat depression,” said Kelly Ryan, neuropsychologist and lead author of the study.



THE TIMES OF INDIA

Make crop insurance farmer-friendly, suggests CACP

Muktsar: Chairman of Commission for Agricultural Costs and Prices (CACP), Ashok Vishandass and member secretary Shailja Sharma on Wednesday visited villages of Muktsar district and interacted with farmers for making crop insurance scheme effective and pro-farmer.

Speaking on the occasion, Vishandass said, "Certain lacunae in crop insurance scheme are yet to make it pro-farmer. The commission would send its recommendations to the Union government stating that the crop insurance scheme should be made effective and crafted in larger interest of the farming community." He said the farmers needed an insurance policy that could fulfill all expenses incurred on losses and the scheme should be long-term and completely transparent. He said, "Farmers are currently paid insurance cover only for some of the input cost whereas the actual loss is much more than the compensation awarded."

He suggested that in such circumstances farmers should be given relief equal to their income during normal harvest season. "The insurance companies should prepare policy in this context by taking suggestions from the commission, farmers and farm experts," he said. The CACP team visited Jhabel Wali and Dodan Wali villages and spoke to farmers about the problem of waterlogging.

Muktsar deputy commissioner Jaskiran Singh shared problems faced by farmers in the area with the CACP team. Punjab director of agriculture Mangal Singh Sandhu said that to improve the fertility of soil affected by waterlogging, the Union government should give farmers gypsum, green manure and machines to improve cultivation.

CM reaches out to state farmers with video-con

LUCKNOW: To mitigate effects of recent farmers' crisis in the country, UP government has now started to promote use of technology in agriculture for increased returns. On Wednesday, chief minister Akhilesh Yadav interacted with farmers from across the state through video conferencing and advised them to use scientific methods in agriculture as means to safeguard against vagaries of nature.

Citing example of developed countries that have suffered from similar crop losses, Akhilesh said they have made alternative arrangements to protect their yields from calamities. To assist farmers with fresh seeds, and higher yield varieties of crops, apart from agriculture implements, UP government has also commissioned scientists to reach expert advice to farmers and to give them necessary inputs for better farming.

Reiterating that the SP government has declared current fiscal as the Year of Farmers, Akhilesh also highlighted other infrastructure development schemes being run by the state government to better farm and rural lives. The CM also used this as an opportunity to inform farmers that government had distributed crop loss compensation of Rs 1,400 crore to farmers, in addition to Rs 90 crore as compensation for farmers' accidental deaths.

South Indian Ragi Mudde Snack



We had you with that name, didn't we? Ragi Mudde is one of the most popular dishes from Karnataka. It translates as millet balls and is a very healthy snack. You can also have it for breakfast for a delicious start to your day. We **love** to seek out the new and once you watch this video, you will be itching to try it out.

Ingredients:

1/2 cup ragi flour
Water as required
1 tbsp oil
1 tsp mustard seeds
1 tsp garlic
Coriander leaves and stems
1 tsp urad dal (black split gram)
1 tsp jeera (cumin seeds)
1 tsp green chillies
Salt to taste
5-6 curry leaves
Hing dissolved in water

Method:

To make the dough:

1. Add one cup of water to the half cup Ragi flour to make a batter. Mix it and ensure that there are no lumps. You can also use a whisk.
2. Add salt to the batter.
3. Heat a pan on low flame. Drizzle very little oil in the pan.
4. Spread the oil with a wooden spoon. Make sure the pan is hot before you pour the batter.
5. Pour the batter into the pan and with a wooden spoon keep on mixing until the batter is cooked and resembles dough. Mixing also ensures that there are no lumps.
6. Once the mixture is completely ready, it is going to leave the sides of this pan. Ensure that most of the moisture is out because you will be rolling it into small balls.

To steam the dough:

1. Grease a thaali with little oil. Spread out the dough on the plate with your hands. Grease your hands with a little oil before doing so.
2. The thickness of the dough will be slightly more than half an inch.
3. Meanwhile, get a steamer ready. If you don't have a steamer, you can boil some water in a medium-sized kadhai. Place a steel bowl in the centre of the kadhai with a little water in it. Make sure that the bowl is not completely immersed in the water.
4. After the water is boiled, place the thali with the dough on the bowl and cover the kadhai with a lid.
5. Now, steam it for good 8-10 minutes or till you can figure out that it is a bit dry and you know that the dough can be cut into pieces.
6. Once it's cooked take it out of the kadhai and let it cool.
7. After it's cooled, cut it into small pieces or you can also roll it into small balls. This [recipe](#) follows the former.
8. Tip: Ragi tends to stick to your fingers. If that happens, use just a little bit of water instead of oil.

Tempering with spices:

1. After you are done cutting the dough into small strips, make the basic tempering.
2. Heat a pan and pour one-a-half teaspoon of oil.
3. Once the oil is hot, add one teaspoon of mustard and allow it to crackle.
4. Once that crackles, add the rest of the [ingredients](#) – urad daal, cumin seeds, green chillies, curry leaves and garlic. Stir the mixture.
5. Now, add the ragi strips. Make sure that each piece is evenly coated.
6. The pieces might stick together because that's the nature of ragi. Use a spoon to gently separate the pieces that are sticking together.
7. If you feel the need to add salt, do so. Just a dash of salt can be sprinkled.
8. Add some coriander.

9. Allow the ragi to soak up the oil that is used. So, sauté for around 30 seconds.
10. Now garnish with coriander and serve.

THE HINDU BusinessLine

Tackling fungus: Banana exporters seek Govt intervention



It is a soil-borne fungus that attacks the roots of the banana plants and turns its leaves yellow. Fusarium wilt, a deadly fungus, that has been spreading in Asia and Africa affecting the \$36-billion global banana production, has been detected in banana plantations in neighbouring Pakistan.

The fungus has reportedly been detected in an area that is prone to flooding and could be a cause of concern for plantations in India, which is the world's

largest banana producer. India has an annual banana production of over 30 million tonnes.

Following outbreaks in Jordan and Mozambique a year ago, the fungus has reportedly spread to Pakistan and Lebanon, experts have said, and could potentially threaten plantations across India.

Even as banana exporters across India are coming to grips with the situation, many are asking the government to assist growers. Some exporters have also urged the government to step in and protect their livelihood.

“Government intervention is urgently required. There is a lot of misunderstanding within government circles that (banana) exporters have a level playing field, but that is not the case. This fungus has been known to decimate entire plantations. Are we even aware and ready to tackle it,” questioned a banana exporter stationed in Mumbai, requesting anonymity.

Massive spread

Commonly known as the Panama disease, the original strain in Cavendish bananas wiped out entire plantations in Panama. It also brought Indonesia’s banana exports of around 100,000 tonnes annually to a grinding halt, causing annual losses of around \$134 million in revenue in Sumatra alone.

The disease has created havoc across many countries. Late last year, it had affected more than 6,000 hectares in the Philippines, and 40,000 hectares in China, according to the United Nations Food and Agriculture Organisation (FAO). The FAO urged countries to step up action to fight the spread of the Panama disease.

Mid-February, the government of Philippines announced it would provide \$2.3 million to counter the disease that has been crippling the country’s banana plantations. The nation has also introduced a new variant – the Fusarium wilt resistant Cavendish banana variety, exports of which have recently passed muster, and have been accepted by the Japanese market.

Commenting on this, the Indian banana exporter pointed out, “Despite all the problems ailing banana plantations in the Philippines, the Panama disease and El Nino, banana production has actually increased by 2.8 per cent in 2014. In 2014, 8.88 million tonnes was recorded in the Philippines, higher

than the 8.64 million tonnes recorded in 2013. Government intervention has clearly helped.”

Another exporter pointed out that the introduction of the new banana variety from the Philippines was found to have high resistance to the disease.

The new variant was cultivated by the Philippines Bureau of Plant and Industry. “When will the Indian government take a leaf from this,” asked the exporter.

High cultivators

Data from the National Horticulture Board showed that Tamil Nadu holds the highest share in terms of banana production, with 5.13 lakh kg accounting for 19.38 per cent share. Maharashtra followed in the second spot with production at 4.52 lakh kg with 17 per cent share.

Andhra Pradesh was in the third position with 13.58 per cent share, followed by Karnataka at 12.23 per cent share and Bihar at 9.54 per cent share.

However, exporters pointed out that several acres of banana plantation have been destroyed due to a storm at Mettupalayam, 40 km from Coimbatore, in January this year, while last month, heavy rains and wind destroyed banana cultivations across Devanallur, Idaiyankulam and Padmaneri villages in the Tirunelveli district of Tamil Nadu. Parts of Maharashtra too have had heavy rain in the first week of May, destroying standing banana crops.

Noting that several cultivators and exporters were aware of the fungus threat from Pakistan, a banana exporter said it was high time the Indian government stepped in to ensure appropriate regulatory measures for farmers, similar to the governments of Ecuador and the Philippines. The two nations continue to be the top two banana exporting countries in the world.

“Steps should be taken to firstly inform and educate farmers about the disease, and programmes initiated to minimise the spread of the disease, which could compromise the country’s booming industry.

The government should also boost shipments,” he said.

Banana is available throughout the year, and usually takes between 3 and 10 days to reach any export destination.

The exporter pointed out that Australia's Queensland University of Technology has also developed genetically modified iron-rich bananas. An agreement has been signed with the Queensland University and five Indian partners, including the Bhabha Atomic Research Centre (BARC). The exporter added that the government needed to inform if this variety could be made disease-resistant.

Desi cotton poised to comeback in North



Desi cotton is set to stage a comeback in North India this year. Lured by relatively better returns, farmers seem to prefer planting the *desi* or native varieties for the current kharif sowing season. However, seed companies maintain that demand for Bt hybrids is intact.

Though the area under such native varieties may not see a significant jump, the fact that farmers prefer it due to its ability to withstand pests and drought is interesting. Besides, the *desi* cotton prices are about 20 per cent higher than the Bt cotton due to short supplies. The short staple and

coarse *desi* variety cotton is mostly used as surgical cotton due to its better absorption capacity and also in making denim.

Sowing at brisk pace

“Sowing across Punjab, Haryana and Rajasthan is being done in a brisk manner. An interesting trend being observed is that farmers are keen on planting the *desi* varieties. This has triggered a demand for *desi* seeds, which we are unable to supply,” said KR Kranthi, Director at the Nagpur-based Central Institute of Cotton Research (CICR).

The *desi* varieties such as CICR I, CICR III and RG8, that are immune to diseases such as cotton leaf curl virus, a major menace in neighbouring Pakistan, have seen good demand. “This demand for *desi* varieties is seen coming back after almost five to seven years,” Kranthi said. Till 5-7 years ago, North India used to have about 60,000-80,000 hectares under the *desi* varieties. “This year, we could see that area coming back,” Kranthi said.

In cotton growing tracts of North India in Punjab, Haryana and the Ganganagar region of Rajasthan, the fibre crop is planted in early May for better results. Currently, plantings are being carried out at a brisk pace, as a delay in wheat harvest has somewhat reduced the window for sowing.

Bt varieties unfazed

“Though there appears to be some interest in *desi* varieties, the demand for Bt cotton hybrids is unlikely to be impacted,” said Paresh Verma, Research Director at Bioseed, the seed business of DCM Shriram Ltd. Bioseed is the largest player in the hybrid cottonseed market in North India, accounting for about 40 per cent of the total market of 65 lakh packets in the region.

“In fact, we used to sell *desi* hybrids till about five to seven years ago,” Verma said adding that Bioseed could possibly be looking at re-introducing them if the market demands.

The genetically modified Bt cotton hybrids had seen a steady increase over the past decade and now accounts for over 96 per cent of the total cotton area, which stood at a record 12.97 million hectares last year.

“The start for this year’s kharif planting season in North India has been good,” said M Ramasami, CEO of Attur, Salem-based Rasi Seeds Pvt Ltd,

the second largest player in the cotton seed market in the region. Rasi has introduced a new hybrid for the Indian market and expects to better its sales this year.

Acreage unchanged

Ramasami said that the total area in North India was unlikely to change despite the low prices that the fibre fetched for farmers last year in the region as competitive crops such as guar (cluster bean) also had not fared well. Though rice also posed a challenge for cotton in Punjab, the declining water table and the poor returns that basmati fetched last year could prompt farmers to go for cotton.

Wheat procurement falls to 21.73 mn tonnes despite eased norms



Wheat procurement has declined by 4 per cent to 21.73 million tonnes so far this year in spite of the Government relaxing quality norms due to crop damage following a recent spell of unseasonal rain and hailstorms.

Wheat procurement was at 22.59 mt in the year-ago. The State-owned Food Corporation of India and state agencies undertake wheat procurement operations at the support price, which commenced from April for the 2015-16 marketing year.

The government has kept a wheat procurement target of 30 mt for the current year, as against the actual procurement of 28 mt in the last year.

“Already, 21.7 mt of wheat has been procured, although slightly lower than the year-ago. The purchase is still continuing,” a senior Food Ministry official told PTI.

Barring Punjab and Rajasthan, procurement in Haryana and Uttar Pradesh has surpassed the previous year’s level, the official said.

According to FCI data, wheat procurement in Punjab has declined to 8.88 mt so far this year, as against 10 mt in the year-ago.

Similarly, wheat procurement from Rajasthan has dropped to 7,07,000 tonnes from 10,27,000 tonnes, while procurement in Madhya Pradesh has fallen slightly to 5.24 MT from 5.31 mt in the review period.

However, wheat procurement in Haryana has risen to 6.25 mt from 6.06 mt, while purchases in Uttar Pradesh improved to 5,87,000 tonnes from 1,61,000 tonnes in the said period.

Wheat procurement has been a big challenge, especially in north India, as unseasonal rains damaged crop quality, forcing the Government to announce a relaxation in quality norms in states such as Punjab, Haryana, Uttar Pradesh, Rajasthan, Madhya Pradesh and Uttarakhand.

Recently, Food Minister Ram Vilas Paswan had informed Parliament that wheat procurement could slip below the target of 30 mt this year, but the relaxation in wheat quality norms may mitigate the impact on procurement.

Of the total target set for this year, Punjab’s share has been fixed at 12 mt, Haryana at 7 mt, Madhya Pradesh at 6 mt and Uttar Pradesh at 3 mt.

Wheat production is likely to fall by 4-5 per cent from the initial estimates of 95.76 mt in the 2014-15 crop year (July-June) due to unseasonal rains.

Year’s highest volume for Coonoor tea auctions

The rising trend witnessed in the offer for Coonoor Tea Trade Association auctions continues this week with the volume of 19.02 lakh kg for Sale No: 19 on Thursday and Friday to be the highest so far this calendar.

This week's offer is as much as 1.70 lakh kg more than last week's offer.

Of this, 13.38 lakh kg belongs to leaf grades and 5.64 lakh kg belongs to dust grade. As much as 17.89 lakh kg belongs to the CTC variety while only 1.13 lakh kg belongs to the orthodox variety. In the Leaf market last week, among corporate buyers, Hindustan Unilever Ltd operated on brighter liquoring, good medium and also medium varieties. Tata Global Beverages Ltd. was fairly active on good medium varieties.

In the Dust market, Tata Global was selective on good medium varieties. Indcoserve was fairly active on medium smaller grades. There was fair enquiry from exporters for medium and plainer teas. There was fair demand for brighter liquoring teas from upcountry buyers.

Business Standard

Lalit Bhasin: For 'Make in India', first 'Innovate in India'

Undoubtedly, India has all the essential elements for a successful 'Make in India' programme - a large young and skilled workforce, an enabling economic environment and competitive wages. Under the policies of the current government, India's manufacturing capacity for innovation and infrastructure is poised for phenomenal growth.

There is empirical evidence positively linking patents, innovation, productivity and investment. To realise the twin dreams of 'Innovate in India' and 'Make in India', the government needs to build a competitive, thriving environment by prioritising scientific research with a strong intellectual property (IP) system. According to a recent article published in *Business Standard*, according to the 2015 IP index by US Chamber of Commerce's Global Intellectual Property Center (GIPC), India continues to languish at the bottom - 29th out of 30 countries. According to GIPC, economies with robust and higher IP protection have 50 per cent more innovative output and are 40 per cent more likely to invest in research and development.

Thus, India attracts only 2.7 per cent of global R&D spend, while China

attracts 17.5 per cent. A robust research environment will encourage trade and investment in India, while fostering benefits such as high-paying skilled jobs, transfer of technology, medical knowledge, and early access to technology and new medicines.

To promote the prime minister's 'Make in India' programme, central and state governments are taking significant measures to reform labour laws, regulatory regime *et al.* But it is a well-known fact that modern domestic industries and entrepreneurship are unable to develop and thrive without a robust and sound technology, which is backed either by domestic R&D or transfer of technology and by proper training.

IP in India is regulated by several legislations, rules and regulations under the jurisdiction of different ministries/departments. As even reflected in the draft National IPR Policy, the statutes governing different kinds of IP in India are the Trade Marks Act, 1999, Patents Act, 1970 (last amended in 2005), Copyright Act, 1957 (last amended in 2012), Designs Act, 2000, Geographical Indications of Goods (Registration and Protection), 1999,

Protection of Plant Varieties and Farmers' Rights Act, 2001, Semiconductor Integrated Circuits Layout-Design Act, 2000 and Biological Diversity Act, 2002. Regrettably, there is no uniformity and harmonisation in the IP policies as the nodal department for trademarks, patents, designs and geographical indications is the Department of Industrial Policy & Promotion (DIPP), which functions under the Ministry of Commerce and Industry; copyright is administered by the Ministry of Human Resource Development; semiconductor integrated circuits layout-designs is administered by the Department of Information Technology; plant varieties and farmers' rights is administered by the Ministry of Agriculture; and biological diversity is administered by the Ministry of Environment and Forests.

The legal provisions need to be implemented harmoniously so as to avoid overlap, conflict or inconsistencies among them.

To harmonise the laws and arrive at a national policy for streamlining of IP in India, the DIPP recently constituted an IPR Think Tank to draft the National Intellectual Property Rights Policy. The objectives of the new IPR policy are to establish a dynamic, vibrant and balanced IP system in India to promote the following objectives:

- foster innovation and creativity in a knowledge economy
- accelerate economic growth, employment and entrepreneurship
- enhance socio-cultural development
- protect public health, food security and the environment, among other areas of socio-economic importance

The IPR Think Tank released its first draft report in December, recognising the fundamental and vital links between intellectual property, promotion, innovation and the successful development of innovative products. The draft policy proposes to reach out to artists, small and medium scale businesses, farmers, corporate entities, scientists and raise public awareness of the benefits of IP for promoting creations, improve the associated legal infrastructure and related services, while emphasising the development of human capital to achieve India's long-term goals. It seems a significant step towards predictability and transparency in India's IPR regime.

The challenge, however, lies in the effective implementation.

Additionally, the US and India are committed to establishing an annual high-level intellectual property working group with appropriate decision-making and technical-level meetings as part of the Trade Policy Forum. A high-level IP working group met in November 2014 for the first time in four years.

To increase patent protection to global standards, it is necessary that innovations arising out of dedicated R&D are promoted and given due recognition, and are adequately protected through patents, designs, copyrights and other IPs so as to create certainty in the minds of innovators and increase investor confidence.

The Indian pharmaceutical industry needs to be ambitious - move from being mere generic manufacturers to forward-looking, research-based companies. The 'Make in India' vision cannot survive in the long-term without concrete measures to build a concurrent 'Create in India' movement.

There are unmet medical needs and these therapeutic areas need to be addressed with innovation-driven cures. And innovation can be ushered in through a robust IP regime.