

Green fields belie the real state of Bardhaman farmers

Ananya Dutta



Deceptive greenery: A paddy field in Bardhaman district of West Bengal which has been hit by lack of rainfall.

AUSGRAM (BARDHAMAN): The vibrant green of paddy saplings that stretch across acres in Ausgram block in West Bengal's Bardhaman district belies the faint cracks in the soil just below and the crisis that has driven three farmers to commit suicide within a fortnight.

The family of 32-year-old Gosai Patra, who hung himself from a tree last week, has not yet informed his wife, who recently gave birth to their second child, of the tragedy.

Already plagued with the possibility of the crop on his two-and-a-half-bighas of land failing him this year, Gosai was informed that his wife was seriously ill and would require a surgery, said Madhusudan Parta, his elder brother. While Gosai was agonising over a debt of Rs.14,000, Madhusudan himself is overwhelmed by the huge loans he borrowed from the mahajan this season.

“Lack of access to institutionalised credit and micro-financing to the villagers is forcing many farmers to borrow loans from local money lenders,” said District Magistrate Omkar Singh Meena. However, Mr. Meena assured that there will be no shortage of food grains as the district witnessed a bumper crop last season.

Pointing to the plants on the seven bighas that were sown this season, farmer Sunil Gop said: “All this greenery that can see is useless. Plants that should have reached a height of nearly four feet by now are stunted at one foot.”

With a deficiency of nearly 40 per cent rainfall in the district this season, most have resigned themselves to a failed crop and mounting debts. Bardhaman is one of the eleven districts in the State to have been declared drought-hit. According to the State Government, of the nearly 44 lakh hectares of land cultivated in the kharif season, 11 lakh hectares remained fallow.

However for the farmers here, fields left bare is not the worst of their troubles.

“There are a very few villages in which less than 90 per cent of the land was sown. Currently we are trying to provide temporary means of irrigation including shallow wells and temporary electricity connections for pumps to the areas,” said Arindam Niyogi, a district official.

But the farmers say the reaction of the authorities to their woes has been too late. “Even if I am able to water the crops now, it will hardly be effective as the plants have not received water at the right time. Usually I get about 10 bastas (60 kilogram) per bigha, but even after irrigation this year I will be lucky to get three or four bastas,” Mr. Gop said.

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Farmers asked to furnish details of pump sets

MADURAI: The Chief Engineer (Distribution) of Madurai Region, Tamil Nadu Electricity Board (TNEB), A. Nachadalingam, has requested all agricultural consumers in the region to furnish details of their motor/pump sets along with other details to TNEB Staff before September 13.

This follows a State Government scheme to agricultural consumers that provides for replacing inefficient sets free of cost, according to a TNEB press release. The Madurai TNEB region

comprises Madurai, Theni, Dindigul, Sivaganga and Ramanathapuram districts.

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NABARD to focus on encouraging rural innovation

R. Sairam

Sanctions Rs. 4.8 cr to establish low-cost training centres across India

MADURAI: Fostering rural innovation that could improve agriculture and the lives of rural masses will be a thrust area for the National Bank for Agriculture and Rural Development (NABARD).

At a three-day workshop on 'Rural Innovation' conducted here recently by NABARD for its officers of four southern States, which was attended by Chief General Manager of Tamil Nadu Region, R.Narayan, a broad road map was drawn up after reaching a consensus among the officers.

R. Shankar Narayan, Assistant General Manager, NABARD, told The Hindu that three areas had been identified for special focus - closer contacts with stakeholders, spot and fund innovations and increase awareness.

IIT alumni

A revolving fund assistance of Rs. 4.8 crore has been sanctioned to Pan IIT Alumni Reach for rural Poor (PARFI), a group of IIT alumni who is working towards promoting innovations in rural India, to set up 20 low cost training centres called 'Gurukuls' across India.

It would impart vocational training to rural youth with assured wage employment in partnership with corporates. Kalyan Chackravarty from PARFI delivered an expert lecture on 'Innovation for Rural Poor.'

Also, he said, more than 260 rural innovations had been funded by NABARD in the most

backward regions of the country with Eastern India being in the forefront of Innovation.

Madurai had witnessed many innovations such as Rural Marts for self-help groups, artisan clusters and farmers' clubs, which were field tested by NABARD in the district.

Supporting innovators

R. Murali, Deputy General Manager, Union Bank of India, who also took part in the workshop, said that its 57 branches in the 12 districts of Madurai Region would partner NABARD to support innovators.

P.V. Ramachandran, General Manager, NABARD, Head Office, said that the bank would use an outcome-based monitoring system to measure the success achieved through adoption of innovation by comparing what has been achieved with what was originally planned.

Inventor

honoured

P. Kantharaj (42) of Arapalayam, who was sanctioned Rs. 1.38 lakh by NABARD for improving a sugarcane harvester he invented, was honoured. He also demonstrated the efficacy of his invention to small and marginal farmers in the workshop.

Published: September 4, 2010 20:29 IST | Updated: September 4, 2010 20:29 IST Washington, September 4, 2010

Most new farmland comes from cutting tropical forest



AP Tropical forests in Ghana. File photo

A new study has revealed that more than 80 percent of the farmlands created in the tropics between 1980 and 2000 came into existence after cutting forests.

As a result it sends carbon into the atmosphere and drives global warming.

Stanford researcher have also noted that big agribusiness has largely replaced small farmers in doing most of the tree cutting in Brazil and Indonesia, which may make it easier to rein in the trend.

More than half a million square miles of new farmland - an area roughly the size of Alaska - was created in the developing world between 1980 and 2000, of which over 80 percent was carved out of tropical forests, according to Stanford researcher Holly Gibbs.

“This has huge implications for global warming, if we continue to expand our farmland into tropical forests at that rate,” said Mr. Gibbs, lead author of the study.

Dr. Gibbs and colleagues at several other universities analysed Landsat satellite data and images from the United Nations to reach their conclusions.

“Every million acres of forest that is cut releases the same amount of carbon into the atmosphere as 40 million cars do in a year,” Dr. Gibbs said.

Most of the carbon released comes from burning the forests, but even if the trees are simply

cast aside, the bulk of the carbon from the plants makes its way into the atmosphere during decomposition, she said. Dr. Gibbs and colleagues found that about 55 percent of the tropical forests that had been cut between 1980 and 2000 were intact forests and another 28 percent were forests that had experienced some degradation, such as some small-scale farming, logging or gathering of wood and brush for cooking or heating fuel. "The tropical forests store more than 340 billion tons of carbon, which is 40 times the total current worldwide annual fossil fuel emissions," Dr. Gibbs said.

"If we continue cutting down these forests, there is a huge potential to further contribute to climate change." But Dr. Gibbs and her colleagues also observed some encouraging signs. The patterns of change in the locations they analysed made it clear that during the 1990s, less of the deforestation was done by small family farms than was the case in the 1980s and more was done by large, corporate-run farms.

Big agribusiness tends to be more responsive to global economic signals as well as pressure campaigns from advocacy organizations and consumer groups than individual small farmers. Along with wiser use of land already cleared, Dr. Gibbs said, improvements in technology and advances in yield intensification also could slow the expansion of farming into the forests. The study was published in the online Early Edition of the Proceedings of the National Academy of Sciences. Published: September 6, 2010 09:06 IST | Updated: September 6, 2010 09:06 IST Berlin, September 6, 2010

Some plants call for "aerial reinforcements" when grubs attack



The Hindu Tobacco plants grown in Kote taluk. File Photo

Tobacco plants send out a chemical SOS call for “aerial reinforcements” from flying insects when the plants are attacked by leaf-eating caterpillars, according to a team of German scientists.

When the grubs begin chewing on their leaves, the tobacco plants send out a chemical “SOS alarm” that attracts predatory Geocoris bugs and directs them straight to the hornworm larvae, said the researchers.

The insects fly in and attack just as the grubs start to hatch from their eggs.

Other plants may have a similar capability, the researchers believe.

The “SOS chemical” is contained in compounds called green leaf volatiles (GLV) commonly emitted by plants when they suffer damage.

GLVs are responsible for the summery smell of freshly cut grass.

The researchers, writing in the journal *Science*, said they have discovered how the newly hatched hornworm caterpillars sealed their own fate when they started munching tobacco leaves.

Researchers said the saliva caused a subtle chemical change in one of the plant’s GLV compounds, switching it from a “Z” to an “E” form to produce a signal instantly recognised by Geocoris bugs.

“The plant cannot see its attacker, but plants can sense the digestive substances that attacking larvae have in their oral secretions when these substances come into contact with the leaves,” said researcher Silke Allmann, from the Max Planck Institute for Chemical Ecology in Jena, Germany.

This ability enabled the plant to summon help precisely when it was needed.

Geocoris is a voracious predator that devours both the eggs and young larvae of the tobacco

hornworm, *Manduca sexta*. It feeds by stabbing its prey with a needle-like mouth appendage and sucking out the body juices.

In tests, the scientists glued hornworm eggs to growing tobacco plants and placed cotton swabs next to them impregnated with different combinations of the GLV chemical. Plants perfumed with the Z-form had only 8 per cent of their glued eggs attacked while those emitting the E-signal lost 24 per cent.

An enzyme in the caterpillars' saliva was thought to trigger the Z-to-E conversion, which took less than an hour, said the scientists.

Geocoris smelled the chemical with its antennae and was able to pinpoint the exact location of the feeding larvae, attacking in under 24 hours.

Why the caterpillar evolved a saliva substance that endangered its life remains unclear. The scientists believe the same chemical that attracts *Geocoris* may also kill potentially harmful microbes eaten with the leaf tissue, so there is a trade-off.

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THE ECONOMIC TIMES

Mon, Sep 06, 2010 | Updated 10.41AM IST

6 Sep, 2010, 03.46AM IST, PK Krishnakumar,ET Bureau

Copra shortage to keep coconut oil prices high

A lower copra output this year due to unseasonal rains in Tamil Nadu and Kerala has hit coconut oil production. Market sources say copra production is estimated to be down by 15-20%. The total milling copra production in India is around 9 lakh tonne, of which Tamil Nadu and Kerala together account for 70%. The rest is produced by Andhra Pradesh and Karnataka. The total coconut oil production in the country is around 5 lakh tonne, of which over a half is consumed by Kerala.

Buoyant prices remain after Onam

After hovering below `50 per kg for a long time, the domestic prices of coconut oil began to surge from June. The prices rose to `58 per kg during the Onam festival season in Kerala, spreading cheer among coconut farmers. The prices usually come down after the festival but this time it has not happened due to a shortfall in copra availability and the wholesale price is ruling around `59 per kg now. Though Nafed has been procuring copra after the declaration of a minimum support price of `44.50 per kg earlier this year, the quantity isn't sufficient to influence the price. The total procurement of copra by Nafed could be below 2 lakh tonne now. The present rise has been attributed to paucity of copra.

Palm oil import affects offtake

Except in Kerala, coconut oil is mainly used for toiletry purposes and for soap manufacturing. With the increase in prices, the industry is shifting to other cheaper oils. The huge import of palm oil into the country has hit the consumption in Kerala. Tamil Nadu and Kerala ship most of the coconut oil for north India but the offtake has come down this year.

Export scenario looks bleak

The prospects of a higher export of coconut oil look bleak as Indian coconut oil is outpriced in the global market now. While the Indian coconut oil sells at \$1,000-1,200 per tonne, it is \$950 per tonne for coconut oil from the Philippines and Indonesia. Last year, India exported around 9,000 tonne of coconut oil. The prices of coconut oil in the coming months will also depend on the vagaries of weather. A sunny weather will lead to a better production of copra, which in turn, will lead to a higher coconut oil output. Consequently, the prices could come down from the present level.

5 Sep, 2010, 12.00PM IST,PTI

Govt releases of 19 lakh tonnes of sugar this month

NEW DELHI: The government has released 19 lakh tonnes sugar in the open market and through the public distribution system (PDS) in September, 2010, about 20,000 tonnes lower than last month.

It will, however, release more sugar during the month in case the prices increase sharply.

"This quantity of 19 lakh tonnes is sufficient to meet the internal demand of sugar for the month of September. However, if sugar prices increase sharply, the government would not hesitate in releasing more non-levy sugar for the month," a senior Food Ministry official said.

Of the total allocation for September, the Food Ministry has allocated 2.28 lakh tonnes of sugar for supply through ration shops (called levy sugar) and 16.72 lakh tonnes in the open market (know as non-levy sugar), the official said.

Last month, the ministry had released 19.20 lakh tonnes of the sweetener.

The Food Ministry fixes the quantity of sugar to be released in the open market and ration shops every month and directs mills to sell the entire non-levy quota during the same month.

The official said however that the mills have been given 15 days extra, till September 15, to sell the non-levy sugar quota of August.

The non-levy quota of 16.72 lakh tonnes for September includes 2.14 lakh tonnes of imported sugar.

The Centre had allowed duty-free imports of raw and refined sugar from February, 2009, to

bridge the shortfall in availability of the sweetener and curb rising prices. India has imported 6 million tonnes of sugar since last year.

Sugar prices have declined by about 40 per cent since mid-January and are now at Rs 30 a kg in Delhi retail market.

5 Sep, 2010, 11.13AM IST,PTI

Soyameal export jumps by 38 per cent in Aug: SOPA

NEW DELHI: Soyameal exports in August rose sharply by over 38 per cent to 1.7 lakh tonnes in comparison to the same month last year, the Soyabean Processors Association of India (SOPA) has said.

The total export of soyameal, used mainly as animal feed, till August during the current oil year stood at 2.05 million tonnes against 3.04 million tonnes last year, down by 32.41 per cent, it said.

The oil year runs from October to September. Soyameal exports during the current month, is expected to be higher vis-a-vis the same period last year, SOPA added.

Soyameal is obtained from crushing soybean, which is an important source of protein for people.

Earlier SOPA has projected a 30 per cent decline in India's total soyameal exports in the current oil year ending September to 2.3 million tonnes due to lower availability of soyabean for crushing.

The country had exported 3.21 million tonnes of soyameal in 2008-09 oil year (October-September). In value terms, the exports stood at Rs 5,686 crore.



Due to the lower crushing activities in the current oil year, exports of soyameal will remain low in the current oil year, SOPA Coordinator Rajesh Agrawal has said.

He said farmers holding back supplies in anticipation of soyameal prices, which are already





high in the domestic market, escalating further was primarily responsible for the slowdown in exports. In India, Madhya Pradesh, Maharashtra, Rajasthan and Andhra Pradesh are the major producers of soybeans.

Weather

Chennai - INDIA

Today's Weather  Cloudy Rain: 00 mm in 24hrs Humidity: 94% Wind: Normal		Monday, Sep 6 Max Min 29.6° 23.7° Sunrise: 5:57 Sunset: 18:18 Barometer: 1007		Tomorrow's Forecast  Rainy Tuesday, Sep 7 Max Min 33° 26°	
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Extended Forecast for a week

Wednesday Sep 8  32° 27° Rainy	Thursday Sep 9  33° 26° Rainy	Friday Sep 10  32° 27° Rainy	Saturday Sep 11  33° 27° Cloudy	Sunday Sep 12  32° 28° Rainy
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Business Standard

Monday, Sep 06, 2010

Govt to review cotton export quota on Nov 15

BS Reporter / New Delhi September 5, 2010, 0:19 IST



The government on Saturday said it might review the cotton export quota in mid-November. The announcement came three days after it permitted duty-free cotton exports of up to 5.5 million bales (one bale is 170 kg) from October.

According to the Ministry of Commerce and Industry, production in the 2010-2011 season is estimated at 32.5 million bales, based on which the government, including the Cotton Advisory Board (CAB), decided to put a ceiling of 5.5 million bales on exports.

However, the agriculture ministry estimated production at close to 35 million bales due to increased acreage. During the 2009-2010 cotton season, total exports were 7.5 million bales, while production was 29.5 million bales. India is the second-biggest producer of cotton.

“There will be a review meeting on November 15 for three reasons. First, we will take a stock of exports that will be made between October 1 and November 15. Second, depending on the supply at that time, we will revise the numbers either upwards or downwards. At this juncture, it will not be possible to assess how much exportable surplus will be available,” Commerce Secretary Rahul Khullar said on Saturday.

The review meeting will also look into the current trends as well as the price situation. At present, cotton exports attract a duty of Rs 2,500 a tonne. The quantum of prohibitive duty will be decided by the departments of revenue and commerce.

“The moment exporters go beyond the ceiling (of 5.5 million bales), a prohibitive export duty will kick in. Removing the duty means we will be gradually shifting to a regime where exports of cotton are tax-free, open and need no licensing. The only requirement will be registration,” he said.

The textiles commissioner will start the mandatory registration of export contracts from September 15. An online registration system is being planned to make the process transparent.

“The purpose behind the ceiling and this intervention is to maintain a balance between the textile industry and farmers. The government has many stakeholders. If I leave it entirely to farmers and traders, there could a situation where all the cotton would be exported,” Khullar said.

Cotton export would be put under the Open General License (OGL). At present, the cotton price is around Rs 1 lakh a tonne. The decision to allow unrestricted exports was taken at a meeting of Commerce Secretary Khullar, Agriculture Secretary P K Basu and Textiles Secretary Rita Menon here on September 1.

THE HINDU Business Line

Business Daily from THE HINDU group of publications

Monday, September 06, 2010

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[Back](#) **Rotting grain and food security**

Stocks in government warehouses do not make for food security; but food in every kitchen on a daily basis does.

The Supreme Court's unsuppressed ire over the wholly avoidable rotting of foodgrains in the

open and its order that grains be distributed to the poor free may have upset many within the government and outside for its overtones of judicial activism. But from a purely humanitarian perspective, the order is but an indictment of the callous attitude of the government towards management of the country's humungous foodgrain stocks. Unabated food inflation hurts the poor the hardest and avoidable wastage of large quantities of food in a country where millions live below the poverty line borders on criminal negligence. One is reminded of the telling lines from a song of Tamil poet Subramania Bharati — 'even if one man goes hungry, we shall destroy the world'. The stark contrast with the current situation is inescapable.

It is easy for policymakers to take refuge under administrative formalities to assert that free distribution of grains is not feasible under the present political set-up. But what has been in demonstration in recent years is the utter lack of political will to deploy effectively the public stocks of grains by making them affordable for the poor. Unconscionable amounts are spent annually on storing vast quantities of rice and wheat, far in excess of the needs of the country, pumping up the food subsidy bill. If these grains rot because they are not stored scientifically, it only reflects the failure of the government's foodgrains management policy and the lack of imagination and commitment to deploy it for general welfare. Food stocks in government warehouses do not make for food security; but food in every kitchen on a daily basis is what does for individual families and the nation.

While there can be no justified argument against increasing minimum support prices or procurement prices for growers, it is necessary to use the procurement policy to address crop imbalances in certain regions. Open-ended procurement of rice and wheat is fast turning counter-productive, going by the serious soil degradation and alarming decline of water table in frontline States such as Punjab and Haryana. Even as an ecological disaster is waiting to happen, open-ended procurement simply encourages continued grain mono-cropping. This is compounded by inadequate storage infrastructure and lackadaisical handling of foodgrains. What we need is a holistic approach to foodgrains production, processing, storage, movement and distribution, with the various ministries at the Centre and in the States playing effective roles in maximising welfare gains from procurement, pricing and distribution. As food security and food inflation are largely seen as the responsibility of the Central government, New Delhi must at least now show renewed resolve for more scientific management of foodgrain stocks.

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Back The economics of food management

Harish Damodaran

Kaushik Basu proposes a new framework for release of foodgrains from government warehouses.



Last year, official food inflation peaked at 21.05 per cent for the week ended November 28. Since then, it has eased — though the year-on-year rise of 10.86 per cent for August 21 is still in double-digit territory.

Moreover, in absolute terms, the 'food articles' index for the latest recorded week, at 303.3, is higher than the 296.1 level for November 28. Thus, while food inflation may have declined, food prices haven't: They have actually gone up.

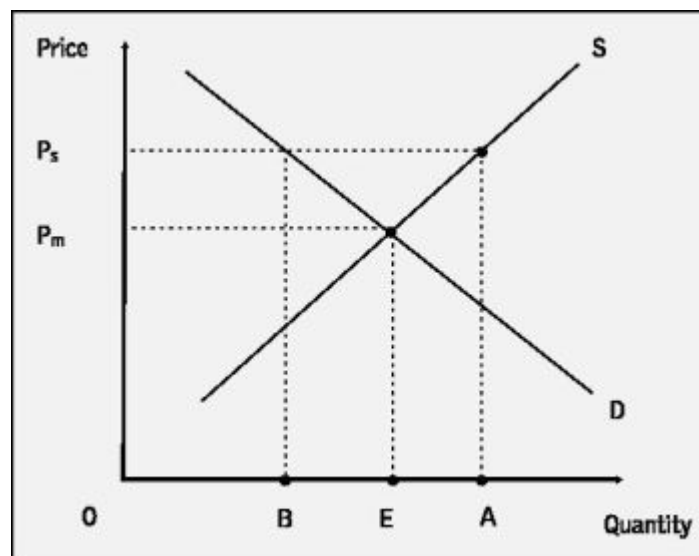
What makes the current episode of high food prices perhaps unprecedented is the fact that it is in spite of overflowing government granaries. As on July 1, public rice and wheat stocks of around 58 million tonnes (mt) were more than twice the required minimum buffer of 26.9

mt. It is this spectacle of 'packed godowns' amidst 'hungry stomachs' that has provoked even the Supreme Court to take notice.

At the heart of the mess is, obviously, flawed foodgrains management. The Government, in recent times, has been procuring more and more quantities of grain from farmers. Increased procurement has, however, not been matched by correspondingly redoubled efforts at releasing the grain where and when necessary. By doing the former well and not the latter, the Government has ended up being a net buyer from the market, while simultaneously raising the average price of food.

The mechanics of this entire process is lucidly illustrated by the Chief Economic Adviser, Prof Kaushik Basu, in a paper posted on the Finance Ministry's website (<http://finmin.nic.in/WorkingPaper/Foodgrain.pdf>).

Economists' approach



Economists are known for using supply-and-demand curve tools to analyse everything under the sun at the drop of a hat. Prof Basu has employed the same technique to understand the workings of India's foodgrain markets and the structure of government policy interventions. For a change, it does throw some useful light on why things have gone so wrong, while challenging entrenched positions even within the Government and Prof Basu's

own Ministry.

The accompanying figure, taken from the paper, depicts a standard demand (D) and supply (S) schedule for, say, wheat. The demand for wheat rises with declining prices, just as farmers (and traders) would supply more as prices go up. If the market is left free, with no government intervention, the price will settle at $P\{-m\}$. At this 'free market equilibrium price', a quantity of OE will be bought and sold.

Now, what happens when the Government steps in, with a view to provide grains to vulnerable consumers at below the market-equilibrium price and also guarantee a certain minimum support price (MSP) to farmers? If the Government wants to buy, it has to pay more than $P\{-m\}$; if it offers less, farmers would rather sell at the market price. In the event, it sets the MSP higher, at $P\{-s\}$, while driving up the market price as well to this level. At $P\{-s\}$, a total quantity of OA would be supplied. Of this, the Government will purchase BA and others the balance OB (which is less than OE).

The problem arises when the Government, having procured the wheat, decides on its offloading. The prevalent practice has been to offer grain from the Food Corporation of India's (FCI) stocks at above its purchase price, covering the MSP plus transport and sundry costs. This strategy, Prof Basu argues, makes little sense. Why should a miller pay above $P\{-s\}$, when he could well buy at $P\{-s\}$, which is now the market price? If the Government is really keen to sell, it should make the grain available at or below $P\{-s\}$.

Why is it not doing so? The answer stems from the mistaken belief that since the FCI is already issuing substantial grains to the poor at below even $P\{-m\}$, it needs to cut some of these losses by selling at above the acquisition cost to non-poor consumers. But then, by trying to sell at a price at which it is unable to sell at all, the fiscal burden on the Government would only be greater, as the cost of procurement is a 'sunk' cost. If the Government genuinely wants to pay farmers more than $P\{-m\}$ and, at the same time, supply wheat to the poor at below P_m , it has no choice but to incur a fiscal cost, which is BA multiplied by $P\{-s\} - P$ (where P covers a range of prices below $P\{-s\}$).

Release, the key

The key to sustain such an operation, Prof Basu notes, lies in managing grain releases. Given that the effect of Government procurement is to raise market prices beyond the normal equilibrium level (P_{-m}), corresponding efforts are necessary to release grain back into the system. In bad crop years — when the aggregate supply curve shifts leftwards, leading to a higher P_{-m} — the FCI should ideally not buy at all. This can be done by keeping the MSP unchanged, so that P_{-s} is below P_{-m} and farmers are encouraged to supply mainly to the market. This, combined with more releases from public stocks, will help stabilise open market prices.

The current system, by contrast, makes the Government a net buyer in all times — whereas it ought to be procuring only during the immediate harvest period (so that farmers solely benefit) and largely in bumper crop years. The release window, on the other hand, should be open round the year.

Prof Basu suggests that the Government must not excessively monitor where the released grain is going and whether traders are making a killing in the bargain. A better way is to release grain from FCI godowns in small quantities to large numbers of millers and traders, and giving them the freedom to make profits. Competition will drive the prices down through natural market forces.

The ultimate aim is to ensure that the grain procured by FCI goes back into the system and the Government does not become a hoarder, which it is today. Point taken, Professor. But can you get your Minister and other higher-ups to agree?

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[Back](#) **Role of technology in transforming Indian agriculture**

Insistence of the scientists that new varieties be provided sufficient nutrients, newer agronomy and proper pest control brought in substantially higher yields.



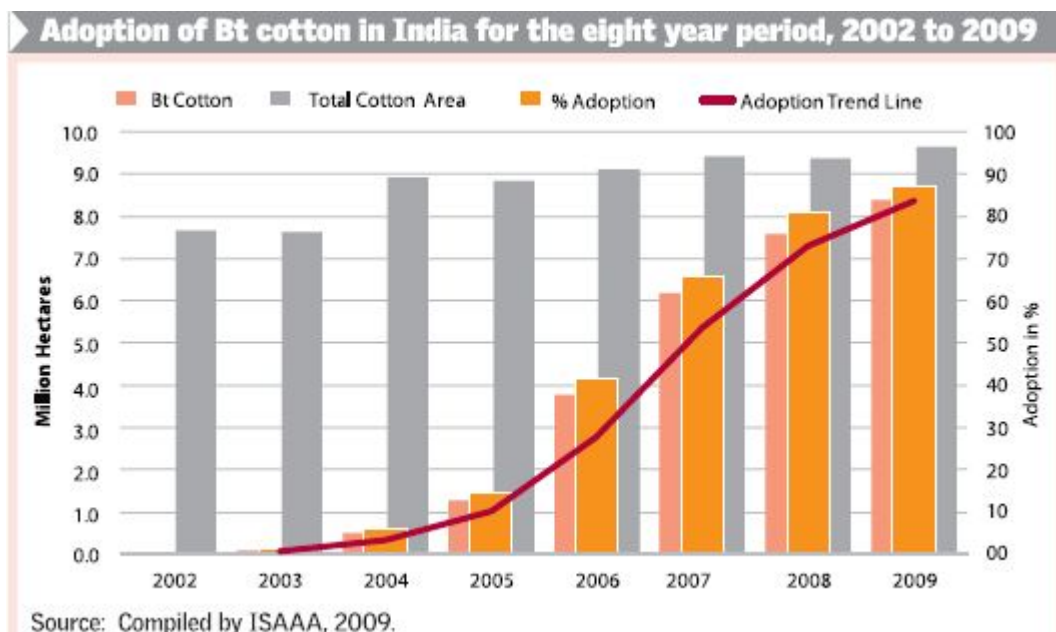
Dr B. R Barwale

A large agricultural country with a population of more than 115 crores (1.15 billion), over half of India depends on agriculture for livelihood.

With population increasing simultaneously with expanding raw materials consumption for industrial production, demand for agricultural products is consistently rising.

In the 1960s, we were overly dependant on imported foodgrains; infamously known as 'ship to mouth' existence. The PL-480 red sorghum we imported was not suitable for bread making; yet, we were forced to consume the grains then.

Now, we are largely self-reliant in wheat and rice, but import large quantities of edible oil (80 lakh tonnes) and pulses (30-35 lakh tonnes) to meet the growing calorie and protein needs of a predominantly vegetarian population.



There are not many suppliers of pigeon pea (arhar/tur) in the world; so, we substitute pigeon pea with peas. Canadian farmers are said to be setting up dal mills to provide Indian consumers with peas-dal.

In 1957, ICAR signed an agreement with Rockefeller Foundation to increase food production.

The first maize hybrids were produced in 1961, the first Jowar hybrid CSH-1 was produced in 1965, and the first Bajra hybrid HB-1 in 1966. Both jowar and bajra hybrids were produced at Barwale Farm, Mandwa, in Jalna district of Maharashtra, successfully for the first time in India.

Simultaneously, the new technology wheat varieties— Sonaro 64 and Larmarojo from Dr Borlaug's evolutions — were tested at IARI by Dr M. S. Swaminathan and his team of scientists, while Dr Challam introduced dwarf rice variety from Taiwan Taichung Native -1.

All these newer varieties were the result of new technology that was being introduced to Indian farmers. Insistence of the scientists that these new varieties and hybrids be provided sufficient nutrients, newer agronomy and proper pest control brought in substantially higher yields.

Thus, the introduction of new technology transformed India from food deficit to surplus. This transformation was named “Green Revolution”.

Now, there is talk of an Evergreen Revolution that must transform our agriculture once again given the new compulsions. To realise the goal, there is urgent need to constantly provide improved and newer technologies so that green revolution remains topical and continuous.

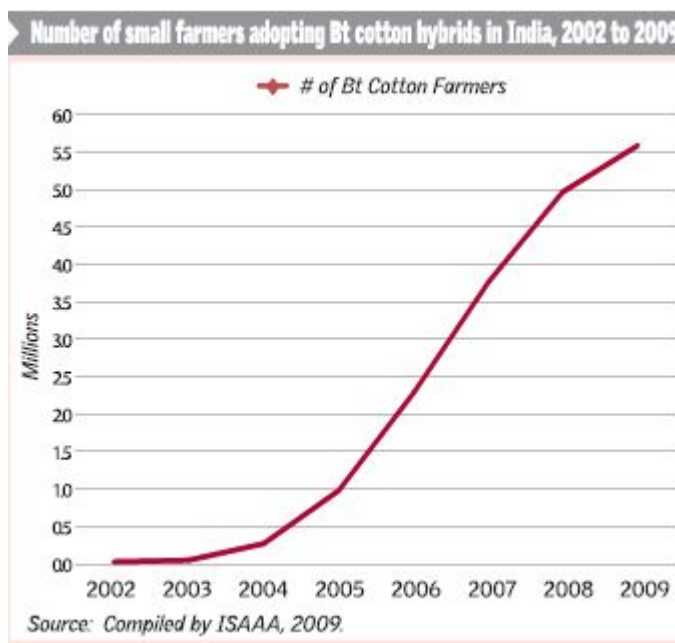
Revolution in Indian cotton sector is a live example of the role of technology in transforming Indian cotton production. In just six-seven years of introduction of Bt seeds, Indian cotton production has nearly doubled.

Specifically, we have become the world's second largest producer after China; world second largest exporter with 85 lakh bales (after having been net importers until a few years ago); and yields have nearly doubled to 570 kg per hectare.

New technology

It is, by far, a record for adoption of new technology by small Indian farmers. In addition to raising growers' returns, it has helped farm labour earn higher wages due to good crop yields.

Today, everybody talks of production in terms of lint; and cotton is termed a non-food crop.



We forget that lint is only 33 per cent of cotton, whereas 66 per cent is food quality oil and cake

(cattle feed).

To achieve food and nutrition security, we need to improve upon crop productivity in cereals (rice, wheat, chickpea, pigeonpea); and oilseeds (groundnut, soyabean, sunflower, rapeseed/mustard) to achieve self-sufficiency in edible oil. It is absolutely possible. In fibre crops, despite improved cotton productivity, there is still scope to elevate it.

Today, major problems in improving productivity are:

1) Drought susceptibility; 2) nitrogen use efficiency; 3) insect damage; 4) diseases; and 5) sucking pests.

But these are not insurmountable problems.

Importantly, we are a talented nation. Our scientists are capable of rising to the occasion and delivering the goods. Our laboratories in public sector are well-equipped. Private sector also has invested large sums in R&D with good results.

They are bringing in products for crop productivity improvement. The farmer is very responsive. He is as good as anywhere in the world. He has accepted the technology for dwarf wheat and rice. The same way or even faster, he has accepted hybrids in cotton and vegetables. He has accepted Bt cotton in a revolutionary way and created a record of technology acceptance.

The Government generally has been supportive of technology in agriculture. However, the country's needs are large and urgent. We need more vigorous and high-speed decision-making.

Several times it is frustrating to invest in and conduct research, with outcomes and policy support uncertain. Eight to ten years of time for a product launch and before that seven years of research is a really long time.

I do not know whether our nation can afford this long timeline given the imperatives of food demand growth.

To overcome pulses shortage, particularly pigeonpea and chickpea, ground-breaking research on pigeonpea (*Cajanus cajan* (L.) Millsp) hybrids and related efforts to improve yields, nutrition and disease resistance have been carried out.

Pigeonpea is suitable for ensuring food security through rainfed agriculture as it tolerates drought, needs minimal inputs and produces reasonable yields of grain containing 20-22 per cent protein and essential amino acids.

The split peas are used for cooking to make dal, which is eaten with bread and rice.

The world's first pigeonpea hybrid, ICPH-8, was released in 1991 by ICRISAT (International Crops Research Institute for Semi Arid Tropics). However, it has problems in producing hybrid seeds.

Scientists have now developed hybrids using cytoplasmic nuclear male sterility, achieving the first breakthrough in this technology by crossing the wild species *C. cajanifolius* with a cultivated line.

The newer method has an excellent and stable male fertility restoration system. It has made possible the development of several genetically diverse experimental hybrids.

While medium duration hybrids, which mature in 170-180 days, yield 2,650 kg per hectare under irrigation, this hybrid yields even higher at 3,250 kg / ha. Efforts are on to introduce Bt in Pigeonpea to control pod borer. Although pigeonpea was a neglected crop, there is now better price support.

With heterosis and control of pod borer, pigeonpea yields can double, bringing remunerative returns to growers. In five-seven years, we can have four times the current production.

Besides it's a leguminous crop and fits exactly into crop rotation.

Chickpea yields also can be rapidly improved by making it pod borer-proof. Mahyco is working on providing pod borer and sucking pest resistance by adding new genes. This also provides opportunity to double the yields.

Besides, the chickpea borer in storage can be checked with this gene.

Without doubt, technology has a critical role in transforming agriculture and in addressing persistent shortfall in crop production.

(Dr B. R. Barwale is Chairman, MAHYCO Group)

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Back Sharp rise expected in clove, pepper prices

Tight supply to bolster price movement.

"The market is tight as both pepper and clove cargoes are not available, and this would push prices further"



G. K. Nair

Kochi, Sept.5

Prices of some of the spices such as cloves, white and black pepper, nutmeg and mace, are to hit the roof within the next 12 months on demand-supply mismatch, with the former outweighing the latter.

And if these predictions translate into reality, the Indian pepper, cloves, nutmeg and mace growers will have a prosperous time ahead like their counterparts in cardamom, trade sources here told Business Line.

A Singapore-based trader was quoted as saying, "We have just started a 10-year price cycle amidst tight supply and expect prices to stay high for the next eight years before petering down towards the tail end of the cycle." The cycle has been delayed for about nine months due to delay in the new crop

Pepper, cloves

According to the trader, pepper and cloves trades appear to be taking the path of nutmeg and mace price trend. He said Mace is trading at \$25,000 a tonne c&f Singapore these days, up from \$7,000 a tonne last year. Nutmeg prices have also surged to \$16,000 a tonne c&f (\$4,000).

"The market is tight as both pepper and clove cargoes are not available, and this would push prices further," said traders in South East Asian markets.

Pakistan

Trading with flood-hit Pakistan has stopped which could release some cargo to other markets, according to the traders, who are also banking on renewed demand from China, the report said.

Vietnam had a good crop year with a harvest estimated at the 1,15,000- 1,25,000 tonnes with another 10,000 tonnes carried on from the previous year.

Vietnamese trade is following the Indian demand closely, but speculators, citing limited supply, have already rated pepper stronger than gold.

Malaysian pepper

The Malaysia Pepper Board August price for white was M\$16,050 (\$5,110) a tonne f.o.b, up 16 per cent from M\$13,860 a tonne a year ago.

Black pepper for August was priced at M\$10,500 a tonne f.o.b, up 23.5 per cent from M\$8,500 a tonne last year, it said. Indonesian white pepper was priced at \$5,800 a tonne c&f Singapore.

Lamong ASTA grade black pepper was at \$4,500 a tonne c&f Singapore, according to the traders.

Vietnam pepper

In Vietnam, white pepper was priced at \$6,000 to \$6,100 a tonne and black pepper was at \$4,200 to \$5,100 a tonne, depending on grades, they said.

On the cloves side, Singapore traders said Indonesian cigarette producers are expected to take up the country's 80,000 tonne bumper clove harvest this year, leaving the export markets in a tight supply situation. However, cigarette manufacturers have not yet started buying. Indonesian cloves were priced at \$6,800 a tonne c&f Singapore. Comoros cloves were at \$6,000 a tonne c&f and those from Zanzibar were at \$6,400 a tonne c&f, while Madagascar was said to be the most competitively priced at \$5,800 a tonne c&f, the PL report said. Elsewhere, bad crops could push up prices, said the traders, pointing out that heavy rains caused by climate change were already hitting major spice producing countries, especially the South Asian region.

Poppy seeds

Meanwhile, another report said Turkey has a bumper poppy seed crop this year and hence its prices have almost stabilised at \$2,500-\$2,600 a tonne.

Consequently, prices in the Indian domestic market is in the range of Rs 230-280 a kg, traders here claimed. Cloves prices in India were at Colombo at Rs 330 a kg,

Zanzibar at Rs 380-410 according to quality. As the international markets are on an upsurge, the import cost for cloves might touch Rs 450 a kg, they claimed.

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Back **The golden bean of 20th century**

FOCUS: SOYABEAN.

The “Golden Bean” of 20th century, soyabean is a legume classed as oilseed with about 20 per cent oil, 40 per cent protein and 30 per cent carbohydrates. It is claimed to produce at least twice as much protein per acre than any other major vegetable or grain crop and has favourable nutrient profile for human health.

Soyabean first originated in China but today top producers in the world are dominated by the western countries. The US ranks first in global soyabean production and acreage accounting for 35 per cent of the total production, followed by Brazil (26 per cent), Argentina (21 per cent), China (6 per cent) and India (3 per cent). These top five countries contributed about 91 per cent of the world's production in 2008-09. In 2009-10, the world produced 258 mt of soyabean and in 2010-11, it is estimated to dip to 250 mt due to reduction in acreage in the US, Brazil and Argentina.

In 2009, the Department of Agriculture, Government of India, reported a slight increase in acreage to 9.67 million hectares from 9.62 million hectares in 2008. According to SOPA data, soyabean production in the country is estimated at 9.72 mt in 2009-10. India produced 1.1 mt of soyabean oil and imported 1.5 mt in 2009-10, which was about 17 per cent of the world's soyabean oil imports.

In the same year, India exported 2.2 mt of soyabean meal, accounting for about 4 per cent of the global exports. India mainly imports soybean oil from

Brazil/Argentina and exports soyabean meal to China.

In India, initially soyabeans were introduced in Madhya Pradesh and Uttar Pradesh where fallow lands were utilised between the kharif (monsoon) and rabi (sowing) season. The short duration of soyabean did not affect the sowing time of the second crop after the monsoon season.

Today, the major soyabean states lie in central zone: Madhya Pradesh contributed to 65 per cent (5.5 mt) of the total production in the country followed by Maharashtra (24 per cent) (2 mt) and Rajasthan (6 per cent) (2009-10).

In Vidharba region in Maharashtra, farmers have adopted this miracle bean over cotton as it requires less inputs, water, less cost of cultivation as compared with cotton. Major varieties planted in India are JS-335, NRC (Ahilya), PUSA, MACS etc and sowing is carried out in kharif season with the onset of rains in the second week of June and harvested in October. Rest is planted in spring mainly in central India.

About 85 per cent of the world's soyabeans are processed, or “crushed,” annually into soyabean meal and oil. Approximately 98 per cent of the soyabean meal that is crushed is further processed into animal feed with the balance used to make soy flour and proteins.

Of the oil fraction, 95 per cent is consumed as edible oil; the rest is used for industrial products such as fatty acids, soaps and biodiesel. With a total of 155 extraction plants, the country has a processing capacity of 55,000 tons/day crushed about 7 mt soyabean in 2007-08, which is about 3 per cent of the world, producing 1.1 mt of oil and 3.2 mt of meal export.

Global soyabean prices are governed by factors like soya oil prices, which in turn depend on demand for soya oil and soya meal, crop outlook for soya and other oilseeds, prices of other competing oils, freight and import duty. Soyabean prices in the Indian market have become extremely sensitive to global trends. The rising demand in China, decrease in acreage in South America or damage due to pest in

the US have had major impact in major soybean mandis such as Indore and Nagpur.

Constraints

Major constraints in Indian soyabean industry are the low-yield production per hectare ie half of the world average, loss due to disease and pest faced by farmers, which goes up to 40-60 per cent damage to crop, competition from palm oil which is cheaper than soyabean oil and changing crop pattern from soyabean to cotton as the latter has more MGP declared by the Government.

Government policies needs to address the issue of crop shifting pattern observed in the soyabean zone and stronger steps needs to be taken to maintain the soyabean acreage. Private players can also play a major role by going forward with contract farming arrangements.

Changing patterns of consumption and production have meant that palm and soyabean oil consumption has increased, from a mere 4 per cent in 1970's to 59 per cent today (38 per cent palm and 21 per cent soyabean) oil today. There lies immense scope and potential to harness the packaging and branding of soyabean oil. Certain developmental steps which could be taken to develop soyabean industry:

- a) Increase acreage: Domestic edible oil production is not sufficient to meet the demand hence we need to increase the production so as to decrease imports. Total edible oil demand is expected to grow by 3-4 per cent per annum over the next 5-10 years, which translates into an additional requirement of 0.3 to 0.4 million tons a year.
- b) Development of better resistant varieties resistant to various diseases and pest.
- c) Research by NCSR, Indore, to double the yield by using advance technology and practices from the developed nations.

d) Favourable policy decisions which will give better MGP to farmers, which will stop farmers from shifting to other crops. (eg: In MP, farmers are showing a pattern of shift to cotton as latter has higher MGP).

Source: YES Bank

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Back Leaf tea prices firm at Kochi sale

Our Bureau

Kochi, Sept 5

Firm price trends were evident at the leaf tea auction while dust sales threw up mixed patterns. There was 11.46 lakh kg of dust tea and 2.46 lakh kg of leaf tea on offer. Most high-priced teas quoted lower at the dust auction while medium and plain grades were the strong feature, attracting good buying support. Good liquoring grades were absorbed by AVT and some export houses like Tata Global. Loose tea traders remained less active while the Kerala State Civil Supplies Corporation lent fair amount of support. Medium and plainer grades witnessed good demand from exporters. Orthodox dust grades were absorbed by exporters.

Leaf Auction

High grown whole leaf, bolder broken and smaller broken grades, all remained dearer following quality at the orthodox leaf auction. Similarly, fannings remained strong and appreciated in value. Medium grades also quoted higher.

Exporters were active, especially those to Russia. Exporters to Tunisia continued to operate on good medium varieties. Hindustan Unilever was active on fannings along with exporters. Good liquoring grades remained firm to dearer at the CTC leaf auction along with fannings.

Medium and small broken grades witnessed good enquiry from exporters. Tata Global remained selective.

Top Prices

Chinnar SFD fetched the top price at the dust auction at Rs 122 followed by Manjolai SFD at Rs 118, Pasuparai SFD at Rs 117 and Surianelle SFD at Rs 115. At the leaf acution, Sutton FOP fetched the top price at Rs 207, followed by Chamraj OP at Rs 207, Chamraj FOP at Rs 205, Sutton OP and Glendale FP at Rs 200.

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Back Sugar policies paying off

Prices are consumer-friendly.



Our Bureau

Mumbai, Sept. 5

Have the government's sugar policies relating to imports and administrative

measures such as stock limits worked well for consumers?

Admittedly, wholesale prices are stable at Rs 2,700-2,800 a quintal the last four months or so, having fallen from January/February levels of Rs 3,700-3,800.

Importantly, sugar prices in India are lower than those in other producing countries such as Brazil and Thailand, said an analyst. Avoidance of import on government account was a prudent step that kept overseas quotes under check at a time when India's own domestic output was revised higher, he asserted. With demand and supply (domestic plus imports) broadly matching consumption needs, no major price volatility is seen except for some minor cyclical pressure during the upcoming festival months, according Mr Tejinder Narang, commodity analyst and former director of PEC Ltd.

Indian prices are currently delinked from the world market because of sound government policies relating to imports and enforcement of stock limits, he asserted, adding "we are safely insulated from the ongoing port congestion in Brazil that is playing havoc with export shipments to many consuming markets".

In contrast, Trading Corporation of Pakistan, the government mandated agency, is facing strong criticism for its failure to organise timely imports of sugar, Mr. Narang points out. Pakistan bought emergency needs of about 3.2 lakh tonnes at a high \$725 a tonne C&F a couple of weeks ago. This translates to Rs 34 a kg.

Thailand, a major exporter, overcommitted sugar for the overseas markets and found itself short in the domestic market, so much so that the Thai government recently bought 75,000 tonnes from multinational warehouses in the country at \$ 720 a tonne. So overall, India is in a happy position as far as sugar availability and prices are concerned, concluded Mr Narang.

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[Back](#) **Pepper to stay hot on tight supply**

G K Nair

Kochi, Sept. 5

High volatility continued to persist in the Indian pepper futures market. The weekend witnessed the prices shooting up after declining

during midweek on bullish reports from overseas. An IPC report of likely price rise in the coming days coupled with a Public Ledger report that the black pepper prices would hit \$7,500 a tonne within 12 months was attributed to the rise in the futures and spot market prices on Friday.

Non-availability of physical pepper in the primary markets is said to be a major problem faced by the trade. Validity expired stocks and farm grade pepper held by investors including the national level cooperatives were being traded in the terminal market at the latter part of the week which also aided the price rise, market sources told Business Line. Domestic demand also expected to pick up in the coming days because of the festival season and the winter. Demand for the winter season in the overseas markets also likely to emanate in the coming weeks as the dealers abroad are said to be not holding much stocks because of the heavy investment involved in inventories.

Indonesia is reported to have sold out much of its new crop while the growers are not ready to sell at the current rates, which they claim are at lower levels, and hence the prices are likely to move up, IPC reported. Brazil where harvesting is underway is also reportedly firm while Vietnam which had already shipped out much of its current crop was also quoting higher. Indian parity at present is ruling at \$4,625 a tonne (c&f) and out-priced when compared with Indonesia. At the same time, high volatility in the futures market was allegedly restricting the exporters from making any commitment even though they may not have much material to offer, they said.

The unhealthy fluctuation in the futures market while pushing small and medium

players out of the market made it difficult for the exporters to hedge or quote. “It is an unhealthy scenario and as such many of the overseas players appear to have started ignoring the market”, they claimed.

Meanwhile the Kerala Spices Small Traders Association has urged the Union government to restrict the benefits of Visesh Krishi and Grama Upaj Yojana (VKGUY) to the Indian farmers only.

They alleged that, at present, this benefit was enjoyed by those importing spices such as pepper, ginger, turmeric etc duty free for value addition and re-export in 120 days to one year. As a result, such importers become beneficiaries of duty free imports and the VKGUY and that in turn benefits the overseas farmers instead of the Indian growers, they alleged. Therefore, they appealed to the Centre to extend the benefits only to those exporters who use only the Indian raw material for value addition and export. The Indian pepper, turmeric and ginger growers are deprived of better prices because of imports using the benefits of VKGUY, they claimed.

September, October and November contracts on the NCDEX ended above the previous weekend close by Rs 306, Rs 310 and Rs 243 respectively to Rs 20,443, Rs 20,643 and Rs 20,806 a quintal. Total turn over dropped by Rs 29,428 tonnes to close at 1,09,832 tonnes. Total open interest declined by 413 tonnes to 16,657 tonnes. Spot prices also moved up by Rs 100 a quintal at the weekend to close at Rs 19,700 (ungarbled) and Rs 20,200 (MG 1) a quintal.

According to the International Pepper Community (IPC) the black pepper prices decreased at various sources during the week, with the exception of Sri Lanka. In Belem, Lampung and Sarawak, local prices decreased marginally by 1 per cent. Decrease of 3 per cent was recorded in Kochi and HCMC. The decrease in pepper prices was may be due to the market players watching on the development of the upcoming crop in Brazil. In Vietnam, prices for black 500g/l decreased by 3 per cent and 1 per cent for 550g/l. In Lampung, farm gate prices stood at IDR 29,000 a kg, with a marginal decrease from last week, while f.o.b

price remained stable at \$ 4,000 a tonne.

White pepper prices were relatively more stable. A marginal decrease of local price in Bangka and Vietnam is noticed. Fob price in of white pepper in Brazil increased by 1 per cent.

During January-June, Lampung has shipped out 12,028 tonnes of black pepper, as against 17,284 tonnes in the same period last year. During the first half of 2010, total export of black pepper from Indonesia is estimated to have around 14,000 tonnes (12,028 mt from Lampung and the balance from Kalimantan and Sulawesi). It is reported that due to climate change and prolonged wet weather condition in Lampung the harvest has not yet completed. Light Berries are more in this year's production. Currently farmers are expecting an increase in domestic price. Hence, they are not willing to come forward to sell their entire stock at the current price level. Due to the current market situation, the prices are expected to increase further.

In 2009, Indonesia exported 38,814 tonnes of black pepper and of which 6,853 tonnes of the material were imported by India. United States was the single largest importer with 57 per cent (22,313 tonnes).

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Back Stress on self-sufficiency in pulses production

Our Bureau

Hyderabad, Sept. 5

There is a need for the county to ensure self-sufficiency in production of pulses, according to Dr William D. Dar, Director, International Crops Research Institute for the Semi-Arid Tropics (Icrisat), Hyderabad.

In his inaugural address at the 'Hyderabad Pulses Conclave 2010' co-sponsored

by Icrisat and Agriwatch here on Saturday, Dr Dar said: "India needs to mobilise innovations and delivery and support systems to ensure that these pulses are sufficiently produced locally. Our shared goal should be that India should be self-sufficient in pulses."

Mr R. Gopalakrishnan, Executive Director, Tata Sons, said there was a need for leadership in mitigating shortage of pulses.

Mr N. Raghuvendra Reddy, Minister of Agriculture, Government of Andhra Pradesh, said the State Government would provide necessary extension support and timely availability of inputs, besides creating a transparent marketing infrastructure for the farmers.

Mr N.V. Ramana, Chairman, Agriwatch, said the objective of the conclave was to bring under one roof research specialists, policy makers and traders to draw a roadmap for self-sufficiency in pulses.

Four states, namely, Andhra Pradesh, Karnataka, Kerala and Tamil Nadu cumulatively account for 15-20 per cent of the total pulses production.

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Back Coonoor tea prices rise on low offer

P.S. Sundar

Coonoor, Sept 5

Prices rose Rs 2 a kg at Sale No: 35 of the Coonoor Tea Trade Association auction on Friday with the demand remaining mostly adequate to absorb the offer of 12.76 lakh kg – the lowest volume so far in 2010. Nevertheless, teas worth Rs 1.04 crore remained unsold because 15 per cent of the offer was withdrawn for want of buyers.

CTC TEAS

In all, 83 marks of CTC teas from bought-leaf factories fetched Rs 100 and more. "Our Super Red Dust (SRD) topped among all CTC leaf and dust teas fetching Rs 138 a kg. Our Broken Orange Pekoe Fanning (BOPF) topped leaf market with Rs 134," Mr Dinesh Raju, Managing Partner, Darmona Tea Industry, told Business Line. Vigneshwar Estate got Rs 134, Garswood Estate clonal and Hittakkal Estate Rs 131 each, Singara Estate Supreme Rs 130.50, Blue Mont Estate and Deepika Supreme Rs 130 each.

ORTHODOX TEAS

Among orthodox teas from corporate sector, Curzon and Chamraj got Rs 187 each, Quinshola clonal Rs 162, Corsely Rs 158, Glendale and Highfield Estate Rs 155 each. "Orthodox leaf market was dearer by Rs 2-5 a kg. Better medium CTC teas got Rs 2-3 more and plainers, Rs 3-5 more. Primary orthodox dusts gained Rs 2-10. Better medium CTC dusts got Rs 2-5 more and plainers, up to Rs 5 more due to good demand," an auctioneer said.

Quotations held by brokers indicated bids ranging Rs 32-38 a kg for plain leaf grades and Rs 80-122 for brighter liquoring sorts. They ranged from Rs 33 to 43 for plain dusts and from Rs 90 to 130 for brighter liquoring dusts.

On the export front, Pakistan bought in a wide range of Rs 33-61 a kg and the CIS, Rs 40-84. Some teas were bought for European ports for Rs 47-70.