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THE HINDU

Antibiotic use in livestock sector set to rise: study

With rising incomes fuelling more demand for meat, India needs to worry about antibiotic usage in growing animals for food, especially poultry, according to a recent study. Such antibiotic use could contribute to the spread of drug-resistant microbes, which are already a major public health problem.

The issue of antibiotic consumption by the livestock sector is a global one, but particularly so for emerging economies, according to a paper published online earlier this month by the *Proceedings of the National Academy of Sciences (PNAS)*.

Greater affluence in low- and middle-income countries was driving "an unprecedented growth in demand for animal protein," noted a team of researchers in the paper. More intensive livestock production systems brought with it greater use of antibiotics, which are administered not just to treat sick animals but also at sub-therapeutic doses as growth promoters and to keep animals from catching disease.

The researchers used statistical models that combined antimicrobial use in a number of high-income countries with data about livestock densities to map global antimicrobial utilisation in 2010. They then projected the antimicrobial use to 2030.

They found that the global consumption of antibiotics for production of animals would rise by 67 per cent over those 20 years. In the 'BRICS' – Brazil, Russia, India, China and South Africa — antimicrobial consumption would go up 99 per cent, up to seven times the projected population growth in those countries.

In India, antimicrobial consumption for meat production could more than double by 2030, according to Thomas P. Van Boeckel, a postdoctoral researcher at Princeton University and first author of the paper.

At least 23 per cent of this increase is attributable to more intensive production systems and the rest to more animals being grown, he said in an email. Moreover, such antimicrobial consumption in India would be growing at a little over four per cent a year while its human population grew at only around one per cent annually.

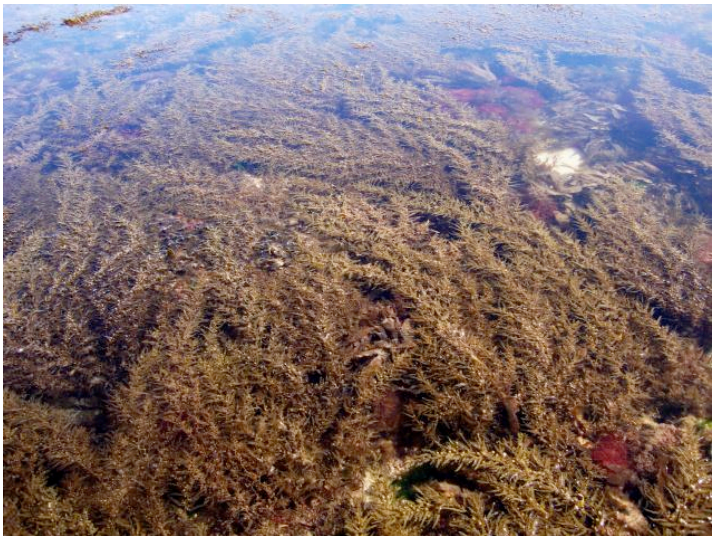
There could be a rise of 477 per cent in antimicrobial use by the poultry sector between 2010 and 2030, while it would be 164 per cent for pig farming. "Thus it is really in the poultry sector that things should be kept under close scrutiny and where the efforts to limit consumption should be targeted," remarked Dr. Van Boeckel.

"Given the significant increases we have seen in infections that are not treatable using common antibiotics, we should take the issue of unnecessary antibiotic consumption very seriously, whether in humans or in animals," said Ramanan Laxminarayan, a senior author of the paper and director of the Center for Disease Dynamics, Economics & Policy at Washington, D.C. in the U.S, in an email. He is also Vice President, Research and Policy, at the Public Health Foundation of India in Gurgaon.

"Most people are probably not aware that the meat they consume comes from animals that are fed a steady low dose of antibiotics to increase their weight gain and compensate for poor hygiene on farms," he added.

"Globally, intensive livestock farming has increased food production at a low cost per unit produced, but perhaps at an unrecognised price paid in increased antimicrobial resistance," the researchers observed in the *PNAS* paper. They called for "urgent and concerted action in all countries" to limit the overuse and abuse of antimicrobials in food animal production.

Value-addition in production of ethanol from macro algae



As the quest for alternate sources of energy in the face of global warming due to fossil-fuel usage gains momentum, the focus has turned to macro algae (sea weeds) as a source of bio-fuel. A new study now demonstrates how macro algal bio mass from *Gelidiella acerosa* and *Gracilaria dura* collected from Adri and Veraval on west coast of India respectively and *Gelidium pusillum* collected from Valinokam on southeast coast of India could be used in a bio-refinery process not only to produce a substantial amount of bio-ethanol (fuel) but also a slew of valuable byproducts such as agar, pigments, lipids and fertilizer.

A ton of fresh biomass supplies several valuable extracts: 0.3–0.7 kg of R-phycoerythrin (R-PE, pigment), 0.1–0.3 kg of R-phycocyanin (R-PC, pigment), 1.2–4.8 kg of lipids, 28.4–94.4 kg of agar (polysaccharide), 4.4–41.9 kg of cellulose and 3.1–3.6 kilolitres of mineral solution (fertilizer). The enzymatic hydrolysis and fermentation of cellulose thus obtained would yield 1.8–17.4 kg of ethanol. A highlight of the process is sequential extraction of the derivatives leading to full utilisation of the feedstock. The process, developed by Dr. C. R. K. Reddy, Chief Scientist, Seaweed Biology and Cultivation Group, Discipline of Marine Biotechnology and Ecology, Central Salt and Marine Chemicals Research Institute, Bhavnagar, Gujarat, and others, is published in the journal *Green Chemistry*.

Biofuel production alone from seaweed resources is not cost effective if other components remain unutilized. Till date, the seaweed processing technologies allow extraction of one or the maximum of two products out of the three —agar, carrageenan, alginate which constitute only 15-30 per

cent of total mass. This means larger proportion of biomass (70-85 per cent) remained unutilized and was drained off along with effluents.

Keeping this in mind, Dr. Reddy and others for the first time developed a biorefinery process enabling recovery of almost all primary constituents (water, pigments, lipids, polysaccharides and cellulose) of biomass. In this process, first biomass was crushed in a phosphate buffer and pigment was recovered using ultra membrane filtration. The buffer with minerals could be reused for extraction of pigments from fresh biomass. The residue remaining after extraction of pigments was subjected to solvent extraction for recovery of crude lipid and the solvents employed in lipid extraction could also be reusable as earlier.

The residue left after lipid extraction was cooked in water at 120ºC for 90 minutes, blended and then separated from the viscous solution by centrifugation. The viscous solution was cooled at room temperature to form a soft gel from which agar was prepared. The residue obtained during agar processing was finally used as a source for extraction of cellulose using different chemical treatments. Dr. Reddy, in an email to this Correspondent, noted: “The advantages of this process are that it is a high throughput and integrated process. The agar’s gel strength improves becoming higher by 1.5-3 folds and the process bypasses some pretreatments of sample such as defatting, decolourisation, acid and alkaline treatments. There is a reduction by up to 85 per cent in chemicals usage in cellulose extraction, and biomass is effectively utilised without any leftover solid waste. The solvents and water can be reused during the process.”

The continued diversion of seaweed polysaccharides, otherwise known as hydrocolloids, for biofuel may kill the billion dollar world hydrocolloid industry. Hydrocolloids have a number of industrial applications. In this study seaweed cellulose only was used for bioethanol production instead of converting entire polysaccharide content into ethanol.

To meet the bioethanol targets, a vast sea front has to be farmed with seaweeds for producing several hundred million tons of biomass for feeding biorefineries.

Seaweed farming is manpower intensive and thus creates new additional employment and sustainable income sources, improving the livelihoods and socio-economic status of economically underprivileged coastal communities. The large scale farming of macroalgae creates ocean-based industry. It mitigates coastal eutrophication minimising the formation of

macroalgal blooms and also mitigates the global warming and climate change effects arising from green house gas emissions by burning of fossil fuels, in addition to freeing the dependency on terrestrial resources for food, feed, water, chemicals and energy.

J&K to get seismic station network

A massive network of seismic stations, accelerometers and GPS instruments is being established in the Jammu and Kashmir region to assess areas more prone to severe earthquakes.

The work is being done by scientists of the CSIR-National Geophysical Research Institute under a project sanctioned by the Union Earth Sciences Ministry.

Vineet Gahalaut, principal investigator of the project and seismologist, told *The Hindu* that the region had not experienced a major earthquake (of more than magnitude of 8 on the Richter scale) for the past 400 years. However, great earthquakes had shaken the rest of the Himalayan belt as in Bihar-Nepal in 1934 and in Assam in 1950.

Also the Kashmir part behaves differently from the rest of the Himalayan arc in regard to small and moderate earthquakes.

Excluding Kashmir, these tremors occur close to the higher Himalayas in a linear pattern, Mr. Gahalaut said. “We don’t see small earthquakes in Kashmir. Is it a good or bad sign? We want to study this.” He said evidence of strain accumulation had been building up in the Kashmir region because of the convergence of the Indian and the Eurasian plates. A great earthquake was likely in Kashmir because of the energy accumulation and the project taken up by NGRI was aimed at

understanding “which region is more likely to be hit by a great earthquake.”

D. Srinagesh, Head of Seismological Observatory at NGRI, said the data were scanty from Jammu and Kashmir. He said a detailed investigation was required to assess seismic hazard scenarios in the Kashmir Himalayas. The scientists would conduct paleo-seismic studies to look into past major earthquakes in that region and take up a detailed investigation of geological, geodetic, gravity and seismological studies to answer some of the fundamental issues relating to earthquake genesis and hazards in the north-west part of the Himalayas.

Mr. Gahalaut said the setting up of the entire network was expected to be completed by this year end.

Ecologist Madhav Gadgil wins Tyler Prize

Renowned ecologist Madhav Gadgil has been chosen for the prestigious 2015 Tyler Prize for Environmental Achievement.

The prize, instituted in 1973, is awarded by the international Tyler Prize Executive Committee with the administrative support of the University of Southern California.

Prof. Gadgil, who was Chairman of the Western Ghats Ecology Expert Panel (WGEEP), will share the $200,000 cash prize with noted American marine ecologist Dr. Jane Lubchenco for their work in changing policy and specifically for their “leadership and engagement in the development

of conservation and sustainability policies in the United States, India and internationally", said a release issued by the University of Southern California on Monday.

Both winners will receive the prize and a gold medallion at a private ceremony in Beverly Hills, Los Angeles on April 24. The day before, Dr. Lubchenco and Dr. Gadgil will deliver public lectures on their work at The Forum at the University of Southern California.

"Both of these laureates have bridged science with cultural and economic realities - like the impact on indigenous peoples in India or fishing communities in the United States - to advance the best possible conservation policies," said the release.

Prof. Gadgil's landmark report on the preservation of the unique ecosystem of the Western Ghats and the inclusion of local committees was especially noted as the reason behind his award that recognised his engagement with the public and other academic fields to "position him as a leading voice on environmental issues in India."

Also noted were Dr. Gadgil's contributions behind the crafting of India's National Biodiversity Act, 2002.

Dr. Lubchenco, who was recently named first-ever U.S. Science Envoy for the Ocean by the United States Department of State, gets the award for her dedication to raising awareness of the importance of the ocean and the need to protect ocean ecosystems, notably during her tenure from 2009 to 2013 as administrator of the National Oceanic and Atmospheric Administration (NOAA).

The award commended her drive and passion in restoring fisheries and improving ocean health, which culminated in the unique "catch share" model – an alternative rights-based approach to fisheries attempting to change the economic incentives for fishermen that has been adopted by a number of regional fishery management councils in Alaska, along the Pacific Coast, the Gulf of Mexico and other regions across the American seaboard.

Delhi to ban storage and sale of tobacco products

All tobacco products including raw hewable *gutka* , *khaini* and *zarda* will soon disappear from the Capital with the State government's Health

Department all set to bring in a notification banning its storage, sale and purchase in the city.

Speaking to *The Hindu* on Wednesday Health Minister Satyendra Jain confirmed that the orders are to come in soon.

"The proposal has been finalised and notification will be issued soon. The fine prints have to be worked out but this is definitely coming to ensure that city dwellers stay tobacco-free and healthy. There was a Delhi government notification in September 2012 which was in pursuance of series of directions from the Supreme Court to ban gutka in the city," he said.

According to officials, gutka is also being supplied to retailers in Delhi from neighbouring States of Uttar Pradesh and Haryana.

The last day of every month has been declared as a dry day for tobacco by the Delhi government.

"We aim to update the notification and remove ambiguities to ensure that biggest source of oral and lung cancer disappears and the city becomes a tobacco-free city," said a senior official.

Seedless cucumber hybrids in polyhouses

The Kerala Agricultural University (KAU) has developed a seedless hybrid cucumber that is ideal for polyhouse cultivation. This is the first such hybrid developed in South India by a public sector research team.

Polyhouse cultivation requires specific cultivars in each crop and farmers presently depend on the seed produced in countries like Korea,Thailand which are imported and marketed by multinational companies in various names.

High priority

The Government of Kerala has accorded high priority to polyhouse cultivation by providing subsidy schemes for setting them up in all the 1,000 odd panchayats in the state.

Farmers depend on corporate sector for hybrid seeds and the price of cucumber hybrid seed ranges from Rs. 5-7 per seed. Thus development of this hybrid by the University is significant as it offers increased availability of indigenously developed seed at affordable rates to farmers, paving way for a fillip in poly house Cucumber cultivation.

KAU Cucumber Hybrid-1(KPCH-1) is found to be significantly superior to commercial hybrids with respect to fruit number, yield and earliness. The Research extension advisory council of the University has recommended this hybrid for testing across polyhouse in all districts.

The research team which developed this hybrid had earlier developed seedless hybrids of yellow and red watermelon, for the first time in the country.

Ideal crop

Cucumber is an ideal vegetable variety for polyhouse cultivation as the fruit is harvested at an immature stage and vertical height of the polyhouse structure can be exploited for producing more fruiting nodes.

Normal varieties bear both male and female flowers and require pollination for fruit development. Honey bees act as the pollinator.

However protected structure prevents the entry of all insects including honey bees. Hence only specific types which produce fruits without pollination can be cultivated inside polyhouses. (Dr. T. Pradeepkumar, Associate Professor, Department of Olericulture, College of Horticulture, Vellanikkara, mobile: 9447300743.)

Advice on plant varieties

A one-day awareness programme on Protection of Plant Varieties and Farmers' Rights Act was held on the campus of the Krishi Vigyan Kendra (KVK) in Kalaburagi on Tuesday.

A release from KVK on Wednesday said that farmers were given details about the importance of protection of plant varieties, farmers' rights and procedure to be followed in registering a plant variety and crops under the protection of Plant Varieties and Farmers Rights Act.

Director of Extension at University of Agriculture Sciences, Raichur (UAS) K.P. Vishwanath said that organising awareness programmes on protection of seeds and implementing Farmers' Rights Act would protect farmers. Around 275 farmers participated in the programme.

Understanding soil for a good crop

The agricultural extension programme of the Krishi Vigyan Kendra (KVK)-Kannur at Panniyur, near Taliparamba, has a lot to offer those who have a love for the soil.

The Jeevanam programme being held at the KVK is aimed at helping farmers learn the quality of soil so as to enable them to use appropriate technology to make farming successful.

The programme includes a technology exhibition, workshops, interaction between farmers and scientists, and experience sharing by farmers. Scientists at the KVK say that understanding the quality of soil using scientific soil test is the key to successful farming. It allows farmer to use proper fertilizers to get a good yield of healthy crops. Healthy plants will be pest-resistant, they say.

The major highlight of the programme is paddy cultivation with the help of technology. The scientists say this practice can yield an annual harvest of one quintal of rice from one cent of land. This method, which uses plastic bags, can be adopted on terraces of houses, they say.

Agricultural College, Padannakkad, that is participating in the fair is showcasing coconut-based value-added products such as Neera, coconut

jaggery, and jaggery jam. Also exhibited at the fair are natural pesticides developed by the Krishi Bhavan at Azhikode.

Farmer's profile should change: KAU Vice Chancellor

The young farmers meet that started here on Wednesday highlighted the relevance of a change in the profile of the average farmer.

Addressing the meet organised by the Kerala Agricultural University's (KAU) Centre for Excellence in Environmental Economics (CEEE) and the All India Radio (AIR), KAU Vice- Chancellor P. Rajendran said that the Indian farmer has always been portrayed as a lonely, tired and distressed figure. But present day agriculture is technology-driven, he said.

"Present day agriculture is drudgery free and driven by technical knowhow, competence and intellectual ability as it is industry oriented. Production of quality food can be definitely viewed as an industry as it involves entrepreneurship as well. Projection of a smart profile for farmers will attract more youngsters in to farming. The successful examples of IT professionals taking up farming as full-time vocation should be projected and popularised," the Vice- Chancellor said.

AIR Thrissur programme head M.N. Rajiv, in his presidential address, highlighted the role of youth in resurrecting the lost glory of agriculture. AIR's long record in aiding and supporting farm sector is well appreciated, he said.

KAU Director of Extension P.V. Balachandran honoured state award winner and traditional farmer Cheruvayal Raman as well as Master Suraj, who won the state award for best organic farmer. "Assured income and stability of price are inevitable to sustain farming. Hi-tech farming has attracted many youth and price support, product diversification and social acceptance will help its progress and sustenance," he said.

Maharashtra plans insurance cover for mangoes

The Maharashtra government is studying a proposal to provide insurance cover of up to Rs. 2 lakh a hectare for mango farmers affected by unseasonal rain in the State.

State Relief and Rehabilitation Minister Eknath Khadse tweeted the plan on Tuesday, adding that cashew farmers too would be covered.

The plight of growers of Alphonso mangoes in the Konkan region was reported ("Rain lays low Konkan's Alphonso") in *The Hindu*, March 22.

The farmers, however, asked the Minister to explain the details of the scheme as similar ones had been in existence in the past. "How much premium do we have to pay for this? What will be the criteria? All these and many more questions need to be answered. We can talk about the government's plan only after we get those details," said Vivek Bhide, president, Konkan Cooperative Association of Alphonso Mango Growers and Sellers.

Several natural calamities had affected farmers in the State over the past two years. Drought in 2013 was followed by a hailstorm the next year.
On Tuesday, the Centre announced a Rs. 2,000-crore relief package for Maharashtra.

Thuthukudi farmers grow beans to overcome water shortage

Thuthukudi district in Tamil Nadu is largely rainfed. Cotton, sunflower, maize, pulses, millets are some of the crops grown in the district which has predominantly black soil. Farmers are heavily dependent on the monsoon for their crops.

Prolonged drought, hot and humid conditions, high evaporation, irregular monsoon are some of the chronic problems plaguing the cultivators in the region for a long time.

Farmers with borewells and open wells seldom opt to grow crops like brinjal, chilli, tomato, banana etc. since vegetable crops are highly sensitive to climate and temperature change. By the time they are harvested and packed to the market they shrivel because of the heat.

Preferred crops

Because of these problems, coupled with low level in the ground water table, cereals, minor millets and fodder crops are the preferred crops.

Some two years back, the percentage of farmers growing vegetables had practically dropped to nil because of water scarcity. SCAD (social change and development) KVK selected 10 villages in Vilathikulam block and decided to grow Dolichos bean variety (called Avarakkai in Tamil) on a trial basis in five farmer's fields to assess the yield potential.

The results obtained were quite encouraging and it was decided to extend the cultivation to 10 more farmers' fields.

"The variety Dolichos CO 14 is capable of producing 8-10 tonnes of green pod per hectare and the crop fetches a maximum of Rs.38 a kg and minimum of Rs. 22 a kg from the local vilathikulam market. Farmers are able to earn more than Rs. 85,000 to Rs. 90.000 as net income in hardly 100 days. After seeing this, more than 100 farmers have approached us for seeds," says Dr. G Alagukannan Programme coordinator, Vagaikulam, Thuthukudi.

Future plans

Plans are on to bring in 150-170 acres under this bean cultivation. Five farmers have been identified to produce seeds to meet the demand of the farmers.

"This bean variety needs to be popularised in a larger way in areas where the farmers are having issues like less water and adverse condition in the ensuing season," he says.

A complete package of practices is provided from the kendra. Farmers were advised to sow seeds at 45x30cm spacing after treating it with Rhizobium solution.

First flowering

The first flowering was on the 38th day after sowing and it continues up to 80 days. About 30ml of effective microorganism (EM) in one litre solution is to be sprayed on 45th, 60th and 75th day to boost the flower and fruit production.

In addition to this three gm of "vegetable special" a crop booster was also suggested to be sprayed after diluting it in one litre on 40th, 55th and 70th

days. To control the fruit borer and jassids a spray with 20ml of neem oil in one litre with soap solution was resorted.

The crop comes to harvest on the 52nd day after sowing and one can harvest 11 times from a single crop, according to Dr. Alagukannan.
Mr. Dharmaraj (52) of Kuruvarpaati village who adopted this cultivation says:
“I harvested about three tonnes of green pod from one acre. For production, I spent Rs.17, 800 and earned a gross income of Rs.1,08,000. Net profit was Rs. 90,000 in about 100 days. Now I have started seed production as many farmers are approaching me for seeds and technologies. I am sure that this crop will increase the income level for us in the ensuing summer months.”

All through the season
Being photo insensitive, the crop can be cultivated throughout the year with limited water and is ideal for dry lands.

For more information contact Dr.G Alagukannan Programme coordinator, mobile:09942978627, SCAD Krishi Vigyan Kendra, Mudivaithanendal Post, Vagaikulam, Thuthukudi, Tamil Nadu: 628102 email: pcscadkvk@gmail.com, Phone: 0461-2269306,web: www.scadkvk.org

Lower VAT on cardamom

Proposals in the State budget to reduce Value Added Tax (VAT) on cardamom to two per cent from the existing five per cent and expansion of area under horticulture crops are expected to benefit the plantation sector in the State.

Suresh Menon, chairman of Planters' Association of Tamil Nadu, has said in a press release here that small growers will benefit with expansion of area under horticultural crops to 27.18 lakh acres from the current 25.95 lakh acres. However, the difference in VAT rates for teas sold by the bought leaf tea factories and co-operative tea factories (one per cent) and the corporate tea sector (five per cent) has not been addressed in this year's budget too, he said.

No clarity on rice by-products

The Union and the State governments procure rice through the custom milled and levy rice mechanisms for the public distribution system. Under the former, government agencies get paddy from farmers at the minimum support price and give it to the mills under an agreement. Under the levy system, millers buy paddy from farmers, mill it into rice and sell it to the government.

"Under both schemes, the government collects 68 kg of parboiled or 67 kg of raw rice per 100 kg of paddy. There is no clarity on the total quantity and pricing of the rest of the 32-33 kg by-products of paddy, neither in government audited balance-sheets nor in rice millers' audited accounts," says Gouri Shankar Jain, a Right to Information activist in

Odisha who complained about the financial dealings between government agencies and the millers to the CAG in August 2012

Under the custom milling agreement with the government, rice millers retain by-products such as bran, husk and broken rice. With the millers hiding or under-reporting earnings from the sales of these by-products and the State governments not sending claims for rice procurement along with the accounts audited by CAG-appointed auditors at the end of each season, the fraud remained undetected, he says.

“This happened because CMR [custom milled rice] rates would remain provisional, not final as required under the rules. In an RTI reply last September, the Department of Food and Public Distribution said the rate for procurement incidentals had not been finalised in most of the States,” he alleged saying he had studied the balance sheets of 2,500 rice mills,” he says.

Rice bran is used to extract oil, husk is used as fuel in power plants, and broken rice is used in breweries and to make laundry starch and products for the food, cosmetics and textile industries.

THE HINDU BusinessLine

Helping potato farmers manage distress

Processors should help in a big way to absorb excess stocks and export processed products

Potato farmers in West Bengal are in dire straits. This is an expected outcome observed every alternate year. Farmers are unable to stock their produce in cold storage as hardly any utilisation space is available.

Nor are they able to market their produce at a mark-up price that can cover cultivation costs. This has led to a deadlock and the State government is trying hard to provide relief.

While the State Agricultural Marketing Department and West Bengal Traders' Association are negotiating an acceptable price and freight subsidy, this might be enough for smallholders.

Processing industries need to lend their hand in a big way to absorb excess stocks and export processed products.

Agricultural Marketing Infrastructure, Grading and Standardisation (AMIGS) scheme can be handy for such efforts.

Trade & Economics

India ranks fourth in the area and third in the production of potatoes. Russia and China continue to dominate potato trade. SAARC countries often seek Indian potatoes of various grades.

India has 7-8 agro-economic zones of potato and the Central Potato Research Institute, Shimla, is a dedicated institute for potato research and extension. Production in 2014-15 is expected to be 30 million tonnes (mt) and per capita availability is 65-70 kg per year (FAO estimate).

Bengal holds a key position in area of cultivation and production of potatoes. It contributes about 25 per cent to the production with Uttar Pradesh accounting for a major share. Bihar, Assam also have their prominence in potato production.

According to official sources, Bengal has a record stock of about 11 mt that includes production in current season and carryover stocks. Last year, potato prices surged to an average of Rs. 30-35 a kg as demand outstripped supply.

However, since early this year wholesale and retail prices have dipped to Rs. 4-5 and Rs. 11-12 , respectively. Accuracy in estimating demand at the start of the potato season is a key to effective production and price forecast.

Value chain

Potato marks its presence in both unorganised and organised sectors. Processing units need potatoes round the year as consumers require potatoes in the form of cooked food or snack products. Business-to-business (B2B) and business-to-consumer (B2C) marketing has been evident in potato value chain. It comprises farmers, dealers/traders, processors and exporters. Fritolay or Pepsico's Sabritas, ITC Food, Keventer Agro, Parle, among others are a few prominent processors. They procure potatoes either through collection centres or by contract farming arrangement.

Major States for procurement include Uttar Pradesh, Bengal, Madhya Pradesh, and Gujarat. Processing units have adjunct pre-cooling centre/cold storage or often they outsource services to third parties. A few varieties are Kufri Jyoti, Lauker, Badshah, Kufri Sundari and Kufri Chandramukhi are traded in spot/physical and forward/futures markets.

Several small and medium enterprises also process potatoes. They have emerged as key regional or local players. Export markets are regulated as sanitary and phyto-santiary measures are imposed.

Bailing out farmers

Bengal needs to avail the benefits of Central Assistance Scheme to set up processing units. Mega Food Park in Jangipur of Murshidabad can take up this given a robust public-private partnership.

Apart from offering a minimum support price, the State should introduce income stabilisation fund for smallholders like the way Kerala and Karnataka have done for spices and plantation crops.

Bengal may take the help of AMIGS scheme refinanced by Nabard, in association with National Co-operative Development Corporation. The Centre for Management in Agriculture of IIM-Ahmedabad and National Institute of Agricultural Marketing can provide consulting services

concerning market intelligence, project finance and implementation of the project. Agricultural Marketing Advisor can empanel the officials of Directorate of Marketing Inspection to conduct project monitoring and evaluation.

Small Farmers' Agribusiness Consortium or SFAC can promote potato producer companies in consultation with not-for-profit organisations or resource institutions and stress on capacity building of member-producers and link them to the value chain. A liquid potato forward/future market can be set up for the basis (delivery) centre of Turkeshwar of Hoogly designing a special contract for producer companies/co-operatives for a reliable price discovery and an effective hedging against price risk. The new commodity regulator might encourage national exchanges to offer a broad-based yet an effective contract in potatoes.

The writer is a Post-Doctoral Fellow of the Centre for Management in Agriculture, IIM-Ahmedabad. Views are personal.

Volume rises at Coonoor tea auctions

A volume of 11.07 lakh kg is being offered for Sale No: 13 of Coonoor Tea Trade Association auction to be held on Thursday and Friday.

It is some 62,000 kg less than last week's offer.

Of this, 7.41 lakh kg belongs to leaf grades and 3.66 lakh kg to dust grade. As much as 10.11 lakh kg belongs to CTC variety and only 96,000 kg to the orthodox variety.

The proportion of orthodox teas continues to be low in both leaf and dust grades.

In the leaf counter, only 37,000 kg belongs to orthodox while 7.04 lakh kg, CTC.

Among the dusts, only 59,000 kg belongs to orthodox while 3.07 lakh kg, CTC.

In the Leaf market last week, among corporate buyers, Hindustan Unilever Ltd operated on good medium varieties.

Other majors – Tata Global Beverages Ltd., Duncan Tea Ltd and Godfrey Phillips India – did not operate.

In the Dust market, HUL was selective on good medium smaller grades and orthodox dusts.

Godfrey Philips was selective on medium varieties. Other majors – Tata Global Beverages Ltd., and Duncan Tea Ltd., did not operate.

Indcoserve was fairly active on medium smaller grades. There was fair enquiry from exporters for medium and plainer teas.

Internal buyers were less active. There was fair demand for brighter liquoring teas from upcountry buyers.

Business Standard

Tamil Nadu makes changes in tax to attract e-commerce industry

Changes in input tax credit has been taken from a futuristic view, says Finance Secretary

The state government has announced two tax changes, related to the Tamil Nadu Value Added Tax Act, 2006, to improve its competitiveness especially in the e-commercespace.

The state has withdrawn a clause to enable the dealers to easily claim input tax credit on interstate sale of goods. Until now, interstate sales to unregistered dealers were not eligible for input tax credit on the respective local purchases.

Now, dealers will only have to pay the local tax, charged at 14.5 per cent.

"Those who do not have Form (C) has to pay the 14.5 per cent and also cannot claim the ITC reversal. This makes them to pay 14.5 per cent for both raw material and finished products. This becomes very unfair and many States have removed. We have been continuing, but we are removing it now," explained K Shanmugam, principal secretary, Finance Department, Government of Tamil Nadu after the Budget presentation by the State Chief Minister O Panneerselvam, who also holds Finance Ministry Portfolio in the State.

"For instance, in e-commerce, if these two taxes are there, the business will shift to other States. Consider a person manufacture a here, keep it in a godown in Tamil Nadu itself and supply through e-commerce, he has to pay 14.5 per cent for raw material and also 14.5 per cent when the transport it to other States. In e-commerce, they supply directly supply to the consumers, without 'C' form. That also will attract the local tax. Since we have taken it out, the State will become competitive. People can have godowns here and do business from here to other States," he added.
This has been looked at from a futuristic view to take care of the State government interest also, he said.

THE TIMES OF INDIA

Oil prices surge after Saudi air strikes in Yemen

TOKYO/SINGAPORE: Brent crude oil prices shot up nearly 6 percent on Thursday after Saudi Arabia and its Gulf Arab allies began a military

operation in Yemen, although Asian importers said they were not immediately worried about supply disruptions.

The strike against Iran-backed Houthi rebels who have driven the president from the country's capital could stoke concerns about the security of oil shipments from the Middle East.

Oil prices jumped as traders saw the attacks as the latest incident in a conflict that is spiralling out of control in the world's richest oil region.

Brent crude oil prices shot up nearly 6 percent on Thursday after Saudi Arabia and its Gulf Arab allies began a military operation in Yemen.

Brent crude oil futures rose as high as $59.71 a barrel, up almost 6 percent since their last settlement, before dipping back to $58.84 a barrel at 0310 GMT, still up $2.36. U.S. crude was up $2.19 at $51.40 a barrel.

"There is a big confrontation between Iran and Saudi (Arabia), between Sunnis and Shi'ites, in Syria and Iraq. This is more evidence that the geopolitical risk in the Middle East has become chronic," said Tony Nunan, risk manager at Japan's Mitsubishi Corp.

Despite the price jump, importers of Middle East oil were not immediately concerned about disruptions.

"Just because Saudi and others conducted air strikes doesn't mean the oil market becomes suddenly tight," said Masaki Suematsu, manager of the energy team at brokerage Newedge Japan in Tokyo.

He cautioned, though, that the conflict could spiral further beyond the airstrikes.

In South Korea, another big Asian importer, officials said the current troubles occurred near the Red Sea, waters that Arab Gulf supplies do not pass through on their way to Asia.

But Arab producers like Saudi Arabia, the United Arab Emirates, Kuwait and Iraq have to pass Yemen's coastlines via the tight Gulf of Aden in order to get through the Red Sea and Suez Canal to Europe.

The narrow waters between Yemen and Djibouti, at less than 40 kms (25 miles) wide, are considered a "chokepoint" to global oil supplies by the U.S. Energy Information Administration and the region is heavily militarized by western navies.

Despite Thursday's price jumps, oil prices still remain around 50 percent lower than in June 2014, when prices began to fall as surging global production was met with slowing demand and lower economic growth, especially in Asia.