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# AGRICULTURE TODAY

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## 9<sup>TH</sup> AGRICULTURE LEADERSHIP CONCLAVE & AWARDS 2019



BUDGET UNION BUDGET 2019

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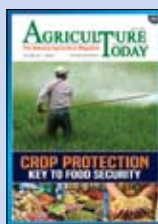
**Circulation Incharge** Rajkumar

**LAYOUT & DESIGN**

**Graphic Designer** A. Rehman

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**E-mail:** [editor@agriculturetoday.in](mailto:editor@agriculturetoday.in)  
[business@agriculturetoday.in](mailto:business@agriculturetoday.in)



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**From the Editor's Desk****POLICY PUSH FOR AGRICULTURE REFORMS**

**A**griculture in India continues to be a powerful engine for food security, economic growth and social transformation with over 55% population directly depending on this sector for its livelihood. The farm sector, however, continues to receive low priority in national economic planning and policy making with often misplaced priorities by the Central and State Governments, resulting in declining public investment, worsening rural urban income ratio, decreasing opportunities in rural areas and growing migration from rural to urban areas.



Continuing restrictions in agriculture from land leasing to contract farming and from marketing to output movement and with distorted system of farm subsidies to ignored extension system, technology development, research and education to human resource development, and from livelihood initiatives to employment generation, from processing to value addition, inputs management to sustainable agriculture and from GAP certification to safe food production and global trade for tapping the market opportunities for food and agriculture, policies that can power the growth continue to elude. The power of policies in translating the potential in agriculture sector into opportunities needs to be leveraged upon for unleashing the growth potential in food and agriculture sector towards empowering the farms and farmers. This can be done by sector specific end to end stewardship approach by research and studies of the issues and agenda, thorough deliberations involving key stake-holders, seamless inflow of the information to create awareness and understanding among the stake-holders and effective advocacy through a series of engagement programs with the policy makers at the state and the national level, keeping global trends and emerging policy paradigm into account. The chosen theme 'Policy Push for Agriculture Reforms' for the 9th Agriculture Leadership Conclave and Awards was thus an apt one.

Agriculture Today has always been in the forefront in addressing the gaps in agriculture and over the years the magazine has taken upon itself as the responsibility to gather the stalwarts in the field of agriculture to a common platform. The 9th Agriculture Leadership Conclave was one such platform which saw intense discussion and debates following which a slew of recommendations evolved from the participants with the potential to create a new road map for agriculture. India has tremendously transformed from a country that depended entirely on foreign shipments to feed its population to a super power in the agriculture sector. This tremendous fete was made possible by the unrelenting efforts of a host of scientists, extension workers, input industries, cooperatives, policy makers and many other entities. Even today, many such components work hand in hand like a well-oiled machine to direct India towards self-sufficiency and food security. Agriculture Leadership Conclave has over the years recognized these efforts and has been maintaining the tradition of honouring them by conferring Agriculture Leadership Awards. Even this year, the conclave in line with its tradition, honoured these efforts with the intent to encourage and support their vision.

It is seldom that one can witness the confluence of the brightest minds in the field of agriculture on a common platform debating and discussing the issues and challenges faced by the sector. It was a rare honour and distinction for Agriculture Today for being a part of such an event and deliver its responsibility towards the farming community.

*Anjana*

**Anjana Nair**

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**Dhwani Agarwal**

E-mail: [dhwani@icfa.org.in](mailto:dhwani@icfa.org.in)

Ph: +91 - 7290010847

**Rubeka Idrishi**

E-mail: [rubeka.idrishi@icfa.org.in](mailto:rubeka.idrishi@icfa.org.in)

Ph: +91 - 8448482486

[www.agtechworld.in](http://www.agtechworld.in)

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## Union Budget spurring Agriculture Growth

*The Union Budget 2019-20 places a lot of emphasis on agriculture growth and development*

**T**he maiden budget speech by the New Finance Minister, Nirmala Sitharaman emphasized the relevance of gaon, gaareeb and Kisan in the new government's reform initiatives. The union budget 2019-20 continued with the previous government's mission of doubling farmers' income and allocations made simply reflected this resolve.

The Budget 2019-20 made a historic allocation for the Ministry of Agriculture and Farmers' Welfare. An amount of Rs 1,30,485 crore —the highest-ever has been allocated for the sector. Agriculture, which formed 3.5% of the budget in FY19, comprised 5.4% of budgeted expenditure in FY20, an increase of 1.9 percentage points (the biggest rise). The allocation proposed represents a 140 per cent jump over the '18-19 budget estimate of Rs 57,600 crore. This leap is mostly due to the staggering Rs 75,000 crore allocated to the Pradhan Mantri Kisan Samman Nidhi (PM-Kisan). Of the agriculture ministry's budget, 57 per cent is now for direct cash assistance to the farmers.

Pradhan Mantri Matsya Sampada Yojana (PMMSY), was another significant proposal by the government. The scheme intended for the Fishing and fishermen communities envisages to establish a robust fisheries management framework at the same time addressing critical gaps in the value chain, including infrastructure, modernization, traceability, production, productivity, post-harvest management, and quality control. This should be seen in wake of the rising importance of the fisheries sector in the agri exports. Strengthening of the downstream activities of fisheries segment was long overdue.

Another significant reference that was made in the budget was about Zero Budget Farming. While saying that we must be returning to basics, Smt-Nirmala Sitharaman suggested the minimalistic Zero Budget Farming as one of the steps to inch towards the larger goal of doubling farmers' income. Technically known as Zero Budget Natural Farming (ZBNF), the system is a set of farming methods that involve

zero credit for agriculture and no use of chemical fertilisers, thus avoiding any expenditure or credit on purchased inputs.

The budget has also proposed Cluster based development through 'Scheme of Fund for Upgradation and Regeneration of Traditional Industries' (SFURTI) which offers to set up more Common Facility Centres (CFCs) to facilitate cluster based development to make the traditional industries more productive, profitable and capable for generating sustained employment opportunities. Focusing on Bamboo, Honey and Khadi clusters, SFURTI envisions setting up 100 new clusters during 2019-20 which should enable 50,000 artisans to join the economic value chain. Further, to improve the technology of such industries, the Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship' (ASPIRE) has been consolidated for setting up of Livelihood Business Incubators (LBIs) and Technology Business Incubators (TBIs). Farmers' access to market has been a critical issue in agriculture. This year the Finance Minister has ensured the formation of 10,000 new Farmer Producer Organizations, to ensure economies of scale for farmers over the next five years. Besides this, the Government plans to work with State Governments to allow farmers to benefit from e-NAM.

Agricultural infrastructure has always been the weakest link in the farming segment. It was promised in the budget to support private entrepreneurs in driving value-addition to farmers' produce from the field and for those from allied activities, like Bamboo and timber from the hedges and for generating renewable energy. Creating infrastructure for cattle feed manufacturing, milk procurement, processing and marketing were also given equal emphasis.

Agriculture remained an important focal point of the Union budget. Going by the historic allocation and the schemes, the resolve had been to address the strain and stress in the agriculture sector. The years before were particularly difficult on the farmers. This budget has aspired to reduce that strain and add more value and income to the farming segment.

## From Green Revolution to Zero Budget Farming

*The Union Budget roots for Zero Budget Farming*

**Z**ero Budget Farming was an important take away from this year's budget. When the Finance Minister reiterated her stance and resolve in doubling farmers' income in time for the 75th year of Independence, she chose Zero Budget Farming to represent the steps that would lead us in that direction.

It is unclear whether it was the loss of faith in the modern agriculture practices or the failure to see any breakthrough in agriculture growth in recent years, had the minister decide to side with the 'back to basics option'. It could be probably an indication as to in which direction our agriculture policies will be shaped. We may side with nature this time to increase the income for the farmers.

Zero Budget farming technically called as Zero Budget Natural Farming (ZBNF) relies on no externally applied inputs. Having said that, no credit or zero budget goes into this system of farming. The reliance on locally procured inputs as fertilizers and seeds cuts down on the dependence of farmers on the market for procuring them. With no external inputs applied, farmers are insulated from the rise in price of the inputs or the lack of access to reliable inputs. No inputs translates to no investments leading us to the moniker, "Zero Budget".

This type of farming was a grass root level movement of peasants that originated from Karnataka and which later spread to many other states. The movement in Karnataka state was born out of collaboration between Mr. Subhash Palekar, who put together the ZBNF practices, and the state farmers association Karnataka Rajya Raitha Sangha (KRRS). The Farming basically relies upon cowdung, cow urine (of local breeds), lime, straw, leaves essentially procured locally. Botanicals are also relied upon. The Economic Survey mentioned Zero Budget Natural Farming (ZBNF) along with Vedic Farming, Homa Farming and Cow Farming and how these "climate friendly" agricultural

practices can enable "elimination of chemical pesticides" and restoration of soil organic matter and fertility.

While one can consider the benefits accrued from natural farming, it would be naïve to assume that zero budget farming with its one stroke can double the income of farmers. While it is true that it negates the necessity of many of the store bought inputs, it is still difficult to believe that it works on 'zero' budget. The labour charges that go into the elaborate preparation of the special concoctions utilizing good amounts of cow dung and urine has been unaccounted for. The system also prefers local breeds of cows and hence their access and procurement would also be a difficult issue. The produce from these farms are technically organic and hence would be unfair to be sold in conventional markets where they do not fetch a premium price. Moreover, the yield obtained from this type of farming would be lesser when compared to those following modern agricultural practices. If increasing farmers' income is gauged by decreasing the money spent on the farm by farmers at the cost of reducing the yield, the strategy needs to be relooked. We do not want the food prices to rise.

Today we have assumed the state of complete food security. Our struggles are towards increasing the access of farmers to markets. We need better infrastructure, logistics – a better connect. It would be unwise to reject the modern system of farming and pursue a loose ended and undefined system of farming. Farmers' welfare is definitely of paramount importance. So is also our commitment towards food security. We have to direct our policies towards getting better market access to our farmers, equip them for facing climate changes, ensure proper credit management and most of all stop lending support to unscientific paradigms. Our policies should be rational, reasonable and stable. Light science lead the humanity.

## Union Budget sans Development

*Union Budget has very little to offer for the agri sector*

**T**he second budget presented this year following the elections was an extension of the previous line of work of the government. Nothing substantial or groundbreaking appeared for the agriculture sector, even though the sector was in dire need of serious interventions at the government level.

The Union Budget 2019-20, however, made a historic allocation for the Ministry of Agriculture and Farmers' Welfare with an amount of Rs 1,30,485 crore —the highest-ever that has been allocated for the sector. Agriculture, which formed 3.5% of the budget in FY19, comprised 5.4% of budgeted expenditure in FY20, an increase of 1.9 percentage points - the biggest rise. The allocation proposed represents a 140 per cent jump over the '18-19 budget estimate. However, this leap was mostly on account of the staggering Rs 75,000 crore allocated to the Pradhan Mantri Kisan Samman Nidhi (PM-Kisan) programme. More than fifty per cent of the amount allocated to agriculture ministry thus goes in to direct cash assistance. No major schemes or development programmes were eligible enough to be addressed by the government. The proposed payment of Rs 6,000 per farmer in the PM-Kisan scheme is an income support and intends to raise the spending capacity of the rural India. However, it is unclear how this will have a positive impact on the farm sector. This cannot even be considered as an allocation towards the agriculture sector. The amount under the scheme has a very little chance of percolating into the development agenda of farm sector.

A passing reference of Zero Budget Farming by the Finance Minister was another interesting takeaway from the budget this year. The type of farming that relies on locally procured inputs and that which avoids chemicals and depends on bio-fertilisers and bio-pesticides is fairly at an experimental stage in certain pockets of the country. Without any scientific data to back, the Zero Budget

Natural Farming (ZBNF) may not yield comparable results across the nation. The results may not be reproducible and hence it would be a fallacy to assume that the adoption of ZBNF would raise the farm incomes substantially. ZBNF was practically followed before green revolution - the one which seriously compromised our ability to feed the nation. We seem to be interested to go back to basics and not forward into the future.

The government as in the previous years also have shown least interest in furthering the research aspiration of the agriculture sector. We undoubtedly are content with the tag on spending least on research and development in the world. Agriculture growth in the future years will be contingent upon how we propose to face the challenges which are renewed every passing year. Climate change, pest and disease resurgence, declining soil fertility, depleting resources have become persistent problems in agriculture. We need to find a right direction to address these challenges. We have to fund appropriate research and development initiatives to find solution to these problems. This budget clearly lacks any vision in this area.

The budget remained elusive with regard to any programmes implementing Good Agriculture Practices or the likes in Indian agriculture scenario. This seems strange considering the impetus the government gave to agri exports last year by formulating a policy exclusive to that domain. Indian food safety system is unfortunately several notches below. Until and unless government finds a way to address these issues, policies like Agri Export Policy will not make any visible impact on the agri sector.

The budget has simply glossed over the agriculture sector of the country and suggested impractical ideas like Zero Budget Farming to meet the expectations of farmers. There was no roadmap that was suggestive of any developmental programmes. It was devoid of any long term plans and lacked practical wisdom.

## Resurgence of FPOs

*FPOs can increase the scalability of farm operations and hence income*

India continues to be one of the world's leading agriculture producers. This has however not elevated the living conditions of the farmers. They remain impoverished, debt ridden and marginalized.

One of the main reasons for this paradox is the scale at which agriculture is practiced by individual farmers in India. More than eighty percent of the farmers in India are small and marginal which means their area of operation is less than two hectares. The disadvantages in being small in scale of production, scale of operation and marketable surplus highly limits their profitability and income. This arises from the huge gap that exists between farm and markets. Timely, easy and cheap access to markets are crucial. Poor postharvest handling and perishability of produce severely reduces the chances of small farmers in recovering income from marketing of produce. Lack of storage facilities and processing opportunities also exacerbates the situation. The situation demands alternate models that would increase the scalability and profitability of farming.

This Union budget there were references to cluster based approach and the Finance Minister expressed hope that 10,000 new Farmer Producer Organisations would be formed in the next five years. Formed by a group of farm producers and a registered body with producers as shareholders in the organisation, FPOs deal with business activities related to farm produce and works for the benefit of the member producers with the profit being shared among the producers. FPO was devised to strengthen the negotiation prowess of farmers through developing a judicious economy of scale at the farm-gate. Their collective power can be utilized in procuring inputs, enjoying the benefits of Farm mechanisation, developing Post-harvest Infrastructure and Market access & connectivity.

The FPOs have over the years attracted much attention. There are over 3,000 FPOs in India. But to what extent they are profitable is questionable. The success of FPOs to a large extent depends on a

slew of disparate and disconnected entities such as banks, retailers and the corporate sector. The value chain required for the development of FPOs, hence is not limited to one participant. A congenial ecosystem is a must for development of producer organizations because they have to deal with the most vulnerable part of agri-value chain, which starts from the farm and goes on till processing and the far-away markets. The critical ecosystem services include emergency credit, consumption credit, production credit, retail services of inputs for agriculture and other agricultural production services required by the small and marginal farmers. Unless these services are provided by a producer organization, it cannot divert the surplus produce from the local trader or shop keeper to the producer organization. In addition, the producer organization can take up other services related to facilitating linkage with the banks and line departments for ensuring the infrastructure access for the business.

A dedicated technical support component is needed to provide the requisite knowledge to FPOs to migrate to a more value-addition and agribusiness focused model. Private sector, knowledge institutions, and NGOs can be suitable additions to this collectivization. FPOs also need financing partners to facilitate capital infusion into FPOs. Unfortunately, FPOs have never been the primary interest of credit lending organization. The credit worthiness of FPOs need to be popularized and promoted to overcome this. Business competence is another criteria that is crucial for the success of the FPOs. Corporate skills and leadership comes in handy as well. Data and technology can expedite the professionalization of FPOs.

The role of FPOs in upscaling the income potential of small farmers is immense. Their role in the entire supply chain from input to marketing is underexplored. However with the current emphasis on the FPOs in the Union Budget, there will be a growing optimism in developing them.



## Promoting healthy poultry farming in India can have lasting impact on human & environmental health: Unveiling new sustainable alternative to bacterial disease prevention

➤ Rising demand for meat and eggs and a resultant turn towards intensive poultry production has in recent decades given rise to a number of health and environmental concerns that pose a challenge to the poultry industry. Bacterial disease causes huge economic losses while resulting in environmental waste and threat to human health. The solution lies in innovation to promote safe and sustainable animal farming. It is estimated that *Campylobacter* and *Salmonella* infections that are rampant in poultry together account for 9 in 10 reported cases of bacteria-related food poisonings globally. On the other hand, excessive use of veterinary drugs, feed additives and anti-microbials that are currently used to treat animals and prevent diseases can have major long term implications on human health and the environment. As one of the largest producers of poultry and eggs, India has also faced concerns over safety of its chicken stock and eggs. #IndiaForHealthyChicken is a powerful initiative that promotes the need for cultivating healthy birds for the larger good of human beings and the environment. To address the challenges emanating from current farming



practices, Proteon Pharmaceuticals, a Poland-based innovative biotechnology company has pioneered a revolutionary new approach to support healthy growth of chicken and other livestock. The new approach provides a sustainable tool for bacterial disease prevention. It also supports healthier poultry birds with improved performance. The revolutionary new approach to bacterial control uses naturally occurring microorganisms 'bacteriophages' to eliminate pathogenic bacteria without causing any harm to the microbiome or gut flora of the birds. By promoting health growth of birds, this

significantly reduces the need for use of antibiotics. Proteon's innovation has been possible thanks to the development of an advanced phage-technology platform. The platform uses precision biology, genomics, bioinformatics and molecular biology to identify, test and select appropriate bacteriophages. Using Artificial intelligence, the technology then selects phages that can be developed for industrial production which are then delivered to the industrial farming environment in the form of feed additives.

## CortevaAgriscience introduces solution for Fall Armyworm

➤ CortevaAgriscience, a New York Stock Exchange-listed company, has launched a new insect-control solution to tackle the Fall Armyworm infestation in India. The company, which has a multicrop research centre here, said the insecticide Delegate contains Spinetoram 11.7 per cent SC, which has been approved by the Union Ministry of Agriculture and Farmers' Welfare to help corn farmers address the new infestation that is spreading fast. First reported in Karnataka last year, Fall Armyworm quickly spread to 14 States, including Maharashtra, Telangana, Andhra Pradesh and Bihar. The Fall Armyworm or *Spodoptera frugiperda* is an insect native to tropical and subtropical regions of the Americas. Left unattended to, it can cause significant damage to crops. Though corn is the first target for this new infestation, scientists caution that it can soon impact other crops as well. The country grows corn (maize) on about 9 million hectares. "Our focus now is to make sure that this solution is available quickly to those who need it the most," Subbarao Kolli, Managing Director (South Asia) of CortevaAgriscience, said. The company claims that Delegate is a broad-spectrum insecticide used to control crop-damaging insects. "It is effective against target insects at a very low use rate, with a margin of safety toward beneficial insects," he said in a statement on Monday. The active ingredient, Spinetoram, has been accepted for review and registration under the Reduced Risk Pesticide Program by the US Environmental Protection Agency (EPA). He said the company would conduct training programmes across the country to educate farmers about Fall Armyworm and its damage symptoms and on how to administer Delegate.

## Gates Foundation, Tata Trusts to set up Rs 100-crore agritech incubator

Bill & Melinda Gates Foundation and Tata Trusts have joined hands to set up the India Agritech Incubation Network (IAIN) at IIT-Kanpur and launch the Social Alpha Quest for Agritech Innovations. With an investment of more than Rs 100 crore expected in the next five years, IAIN is envisioned as a network of incubators across the country to promote innovations for small farmers. Uttar Pradesh will benefit the most from this initiative as it will focus in the three most backward districts of Bahriach, Shrivasti and Balrampur. The initiative is an effort to raise the income and agriculture production of the small and marginal farmers with innovative technology. Experts feel that the change would be observed within next two years' time. The first hub for IAIN has been set up at IIT-Kanpur's Innovation and Incubation centre, in collaboration with Social Alpha, Collectives for Integrated Livelihood Initiatives (CInI) and the government of Uttar Pradesh. As part of IAIN, a physical incubator will be set up at IIT-Kanpur to provide incubation services, including specialised laboratory infrastructure, venture-building resources, financial support and farmer community access to help catalyse the lab-to-last-mile journey. Over the next five years, the plan is to support 60 enterprises with technology and business incubation that will impact 50,000 farmers. The Social Alpha Quest for Agritech Innovations was announced with the aim of enabling an ecosystem for innovators and entrepreneurs to develop farmer-focused technology solutions. The objective would be to empower small and marginal farmers towards increasing productivity and profitability. The Quest is looking for innovators and entrepreneurs with transformative technologies that address a curated set of challenges faced by smallholder farmers. Up to 12 innovations will be selected to be a part of the first cohort of the IAIN and will receive incubation support for the next 12-24 months. UP principal secretary (agriculture) Amrit Mohan, while releasing the logo of the IAIN here, appreciated the initiative and claimed that only technology can change the entire agriculture scenario.

### Madhu Jayanti buys Eveready's packet tea business

The Rs390-crore MadhuJayanti International, which is primarily into the manufacture and export of value-added teas, is looking to ramp up its domestic business with its recent acquisition. The company acquired Eveready's packet tea business and its brands — including Tez Red, Premium Gold and Jaago — for Rs6 crore. The combined sales volume of these three brands is estimated to be close to 3.8 million kg (mkg), and the value is pegged at around Rs68 crore. MadhuJayanti's total sales volume is close to 11 mkg, primarily from international markets such as Russia, West African nations, Australia and West Asia. India sales are close to 2.6 mkg. The company sells tea both through its own brands and private labels, either in packets or as tea bags. According to Sumit Shah, Executive Director, MadhuJayanti, the acquisition would help add an additional 3.8 mkg to the company's domestic business. MadhuJayanti, which had been largely focusing on international markets, started eyeing the Indian market and expanding here about five years ago. It launched two new brands TE-A-ME teas and Sphoorti on the back of its existing packet tea brands — Saraswati Tea and Lalpan tea — sold in Karnataka and Maharashtra. While TE-A-ME is sold pan India, Sphoorti is largely restricted to Maharashtra. "With the acquired brands, we plan to strengthen our packet tea business and portfolio. In India, we will look to be a national player rather than being a regional one," Shah said. Eveready's packaged-tea business operates in 14 States: Bengal, Bihar, Jharkhand, Odisha, Uttar Pradesh, Uttaranchal, Madhya Pradesh, Chhattisgarh, Rajasthan, Punjab, Himachal, Gujarat, Maharashtra and Karnataka. So the acquisition will give MadhuJayanti access to 12 more States apart from Maharashtra and Karnataka. Domestic sales currently account for nearly 33 per cent of the company's total turnover at around Rs129 crore. The acquisition of the brands is likely to scale up its value sales to Rs198 crore, immediately. This is expected to further increase to nearly Rs 350-370 crore in the next five years, backed by the addition of new brands and expansion into newer markets.

### KPR Agrochem prices issue at Rs 59-61/share

KPR Agrochem plans to raise Rs210 crore through issue of fresh shares via an initial public offering. The IPO, priced between Rs59 and Rs61, will open for subscription. The earliest closing of the IPO will be July 2. The promoters will dilute 1.2 crore equity shares through offer for sale. Equity shares in the IPO are offered at a discount of Rs3 apiece to the retail investors and eligible employees. The agriculture input company focussed on manufacturing and retailing of a wide range of crop yield-enhancing and protection products will list on the BSE and the NSE. Raja Sekhar Reddy, Executive Director, KPR Agrochem, said with the government's focus on agriculture sector, the company expects good growth with sufficient working capital from the IPO. The QIB and non-institutional investor categories will be of 25 per cent and 35 per cent, while the retail portion will be not less than 40 per cent. The IPO also consists of a reservation of up to 4.3 lakh equity shares for eligible employees. With focus on its core competency of agriculture inputs, the promoters recently sold off a non-core caustic soda project to Grasim Industries. KPR Agrochem's portfolio includes seeds to crop nutrients products to crop protection products and veterinary feed supplements.

## To reduce fertilizer use, govt eyes direct subsidy transfer

➤ In its bid to disincentivise farmers from excessive use of chemical fertilizers, the government is preparing to move on a long considered proposal for direct cash transfer of the subsidy amount to farmers' bank accounts. The funds transferred will be used only for buying soil nutrients while two options are being explored to decide the cash subsidy — either by fixing the amount per acre/ hectare or a lumpsum amount for all identified beneficiaries on the lines of PM-Kisan scheme, official sources said. The plan to move to DBT will be a fundamental change in the manner in which fertilizer subsidies are administered in India as funds have been transferred to manufacturing and retailing companies. Direct payments to farmers are seen as better to ensure delivery of subsidies to the end user. The draft report of a panel under Niti Aayog member Ramesh Chand had recommended the two options and consultations are on to finalise the plan. "Once the mechanism is approved, we will be able to roll it out in three to four months. Though authenticating size of land holdings is challenging, we can take the data from PM-Kisan, which has the details of beneficiaries and their land holdings," said an official. Currently, farmers are allowed to buy as much fertilizer as they want at subsidised rate and its based on a "no denying" policy. The government directly pays the subsidy amount to manufacturers or marketing firms. Under the new system, the subsidy will be credited to farmers.



## DBT Phase 2 for Fertiliser Subsidy Launched

➤ The government launched the second phase of the direct benefit transfer (DBT) of fertiliser subsidy bringing more transparency and accuracy in the system and paving the way for direct cash transfers to farmers. In the first phase of DBT, the government started paying subsidy to fertiliser companies strictly on the basis of actual sales to farmers, which has eliminated fake beneficiaries. It is now exploring the feasibility of transferring cash to bank accounts of farmers. The second phase upgrades the technology but the subsidy continues to be credited to fertiliser companies based on the actual sale made by retailers to farmers as in the existing system. The next step would be to transfer subsidy directly to farmers' account, which is likely to take place within a year, officials said.

## States told to shift farm focus from production to marketing



➤ Working towards Prime Minister Narendra Modi's mission to double farmers' income by 2022, Union Agriculture Minister Narendra Singh Tomar urged the states to shift their focus from production-specific approach to market-oriented agriculture with stress on exporting the produce. Addressing a conference of state agriculture ministers, Tomar emphasised the need for states to develop synergy with the Centre for better implementation of welfare schemes and programmes meant for the agricultural community. The minister also urged the states to take measures to reduce the input costs of cultivation for better income generation, besides reinforcing the initiative for judicious use of fertilisers on the basis of soil health card. The conference, first in Narendra Modi 2.0 regime, was convened to discuss agriculture-related issues with an overriding goal to increase income. The focus was on central schemes, including PM Kisan Card, PM Fasal Bima Yojana, e-National Agricultural Market (e-NAM) and organic farming and market reforms. Tomar

lay thrust on ensuring proper price to farmers for their produce and bolstering agricultural marketing through e-NAM, "which has the potential boost exports".

## Central govt plans to make crop insurance voluntary for all farmers

➤ The Centre is planning to tweak the Pradhan Mantri Fasal Bima Yojana (PMFBY) by making crop insurance voluntary to all farmers, removing high premium crops and giving flexibility to states to provide customized add-on products, a senior government official said. Launched in April 2016, PMFBY provides comprehensive crop insurance from pre-sowing to post-harvest period against non-preventable natural risks at extremely low premium rate of 2% for kharif crops, 1.5% for rabi crops and 5% for horticulture and commercial crops.

## Govt to promote maize over paddy

► To achieve the dual objective of pushing diversification, preserving environment and saving groundwater, the state is all set to increase area under maize from the existing 1.08 lakh hectares to 2 lakh hectares. With this exercise of the agriculture department, the arrival of maize in the market will get enhanced from 4,14,000 tonnes last year to 7,60,000 tonnes during 2019-20. Maize suits the state given the fact that its groundwater is depleting at a fast pace. It requires less water in contrast to paddy. For production of 1 kg of rice, an average of 3,700 litres of water is required. On the other hand, same quantity of winter maize or corn production needs just about 1,222 litres. The promotion of maize in contrast to paddy by 92,000 hectares will lead to arrest of Punjab's constant environment degradation problem. The focus on maize will also help check the problem of paddy straw burning. The department has initiated a programme to financially compensate a set of selected farmers from 100 per cent paddy crop dependent districts of the state who will switch over to maize.



## Export-promotion forum, trade fair to boost farm cooperatives

► The government has announced that an export-promotion forum for the cooperative sector will be created soon. An international trade fair will also be organised on October 11-13. The forum will be set up under the National Cooperative Development Corporation (NCDC), after consultations with 20 states and three Union territories, said Commerce and Industry Minister Piyush Goyal and Agriculture Minister Narendra Singh Tomar on Tuesday. The government hopes this will work as an exchange platform for the cooperatives. Both ministries have committed to establish a framework to double farm exports from Rs 2.75 trillion to about Rs 7 trillion by 2024-25. There are more than 800,000 cooperative institutions in India; 94 per cent of 1.5 million farmers in the country are members of at least one cooperative. Along with this, a trade fair will be held by the agriculture ministry and will be supported by the commerce and external affairs ministries. The latter is expected to ask India's diplomatic missions abroad to get foreign participants for the fair. While cooperatives from the farm sector will be the primary participants, cooperatives from other fields such as textiles and leather may also be allowed.

## Cabinet announces minimum support price of 14 Kharif crops

► Even as the slow movement of the monsoon has drastically affected the Kharif crops sowed by farmers across the country the Union Cabinet on Wednesday announced a Minimum Support Price (MSP) of 14 Kharif crops. The MSP hike, the first since the government was re-elected earlier this year, pales significantly when compared to increase in the last Kharif season, just before the general elections this April. The quantum of increase however, does not significantly deviate with the increase in non-election years. This year, for paddy – the country's main Kharif crop – the new MSP is Rs 65 per quintal more compared to last year. The MSP of rice, which was bought by Central and state governments last year at Rs 1,750-1,770 per quintal last year, has

increased by Rs 65 this year to Rs 1,815-1,835. The crop, on an average, is sown in more than 40 per cent of the total area covered by the rest of the crops named for the MSP hike. The new MSPs stood at Rs 2,550-2570 for Jowar, Rs 200 for Bajra, Rs 3,150 for Ragi, Rs 1,760 for Maize, Rs 5,800 for Tur (Arhar), Rs 7,050 for Moong and Rs 5,700 for Urad. The MSP for cotton is now Rs 5150-5450 per quintal. Among oilseeds the MSPs for Groundnut, Sunflower seed, Soyabean, Sesamum and Nigerseed are Rs 5,090, Rs 5,650, Rs 3,710, Rs 6,485 and Rs 5,940 per quintal respectively. In 2018 the MSPs for Ragi, Jowar, Bajra and Maize had jumped by 57 per cent, 42.9 per cent, 36.8 per cent and 19.2 per cent respectively when compared to 2017. Data from the agriculture

ministry, which was published on June 28, also indicated that sowing of Kharif crops has been slower compared to the average for the corresponding week. The data shows that rice, normally grown in 35.54 lakh hectares during this time, has only been sown in 27.09 lakh hectares – a dip of roughly 24 per cent. Similarly, the sowing area for Jowar fell by less than half from 2.37 lakh hectares to 1.11 lakh hectares. The slowest crop however, was Soybean, sown in just 2.75 lakh hectares – barely a fifth of the total area it normally covers. Apart from a delayed monsoon, the country also witnessed a 32.8 per cent deficient rainfall for the month of June. But according to the India Meteorological Department, monsoons will be better in July and August.

## Farm credit may exceed Rs 13 lakh crore in FY20: Nabard

▶ The credit disbursement for the farm sector may exceed Rs 13 lakh crore in 2019-20 against Rs 12.5 lakh crore disbursed during last fiscal, according to Nabard. Finance minister Nirmala Sitharaman did not announce the farm credit target for this year in her Budget speech. Speaking to reporter, Nabard chairman Harsh Kumar Bhanwala said the deficit in sowing areas will make up by end of the season and monsoon may also be normal as predicted by the India Meteorological Department. Sowing and monsoon, the two key factors that influence demand for agricultural credit, will be favourable for the sector, he said. The share of the National Bank for Agriculture and Rural Development (Nabard) in total agricultural credit was about Rs 1.80 lakh crore last year while the remaining are disbursed by public and private sector banks. According to an estimate, about 70% of the agricultural credit is extended as short-term crop loans while 30% is disbursed long-term of about 3 years repayment period. While there is a general interest subvention of 2% (from the base rate) for all farm loans, an additional 3% interest subsidy on crop loans up to Rs 3 lakh is paid to farmers who repay their loans in one year, making the effective rate of interest at 4%. Bhanwala also said Nabard plans to raise about Rs 55,000 crore from the domestic market in the current fiscal to fund its business growth and also support various agricultural and rural development schemes of the government. Nabard has already raised Rs 12,000 crore from the market in the first quarter of the current financial year, the chairman said. The agency had raised Rs 56,069 crore through non-convertible debentures, of which Rs 33,169 crore was for the government schemes and the remaining was for Nabard's own funding requirements. It raises funds through long-term bonds, usually of 10-15 years tenures. In 2018-19, Nabard's loan portfolio grew nearly 22% to Rs 4.32 lakh crore. Assets under management of the bank were at Rs 4.87 lakh crore at the end of March 2019, up by 20% since March 2018. Separately, Nabard also raised about Rs 30,000-crore extra budgetary resources for various government programmes.



## State govt to cover 5 lakh farmers under crop insurance scheme

▶ With a view to expanding crop insurance in Assam, the State government has set a target to cover at least five lakh farmers under the Pradhan Mantri Fasal Bima Yojna (PMFBY) in 2019-20. As part of the plan, the State government has divided all the districts of Assam into clusters for coverage under the scheme. Besides, for the first time since the introduction of PMFBY, the implementing agencies have been selected for a duration of three years, as against for a single crop season, as has been the norm so far. "The aim is to give a major boost to crop insurance in the State. That is why the government has set a target to cover at least five lakh farmers during this year, including the Kharif 2019 season and the Rabi 2019-20 season. So, at least 2.5 lakh farmers are set to be included under the scheme in each crop season, which is a much larger figure than in any of the previous seasons since the scheme was launched in 2016," a senior official said. He added, "The government has also decided to go for a longer duration of allotment to implementing agencies with a view to facilitating the insurance firms to get acclimatised with their respective zones and clusters. Frequent change of agencies discourages them from undertaking long-term efforts. Besides, selection of new agencies every year or each crop season is a very time consuming."

## Farm sector push draws 91% more

▶ Clearly indicating its thrust on the agricultural sector, the Modi Government increased the budgetary allocation of the sector by a whopping 91 per cent — from Rs 67,800 crore (revised estimate) in 2018-19 to Rs 1.30 lakh crore for the current fiscal. The Government had allocated Rs 46,700 crore in the actual Budget for 2018-19. Of this, Rs 75,000 crore will be for the flagship scheme Pradhan Mantri Kisan Samman Nidhi (PM-KISAN). Allocation to PM Kisan scheme is aimed at providing structured incomes support to poor and rural farmers of Rs 6,000 per year for farmers with land holdings below two hectares. This benefit is to be transferred directly into the bank accounts of beneficiary farmers in three equal installments of Rs 2,000 each and will be funded directly by the Centre. This scheme will benefit around 12 crore farmers. Presenting the Budget for the 2019-20 fiscal, Union Finance Minister Nirmala Sitharaman said the Government keeps "gaon, garib, aur kisan" at the centre of everything that it does. The huge allocation of funds will help to improve average annual growth in agriculture sector which is 2.88 per cent and improve the farmers' income. The Budget has focused on zero budget farming, which is a form of natural farming — neither chemical-loaded nor organic with its reliance on manure.

## NABARD aims to fund 100 agri start-ups

➤ National Bank for Agriculture and Rural Development (NABARD), India's apex development financial institution, would give a push to agri and rural start-ups in the country with a view to generate employment opportunities in the rural areas. Delivering the Foundation Day Seminar inaugural address, Shri Anurag Singh Thakur, Minister of State, Finance highlighted the need to attract youth to agriculture and build a technology-driven ecosystem for agri-entrepreneurship and called for concerted efforts to create a large base of agricultural start-ups. He inaugurated the Seminar titled 'Engaging Rural Youth Gainfully' organised on the occasion of 38th Foundation day of NABARD. On the occasion, the Minister felicitated 5 agri business start-ups funded by NABARD and also released a book profiling 9 such personalities. "India needs to create agripreneurs for which skilling and tech-enabled services are crucial. Agri-based e-commerce platforms, farm monitoring, linking with fintech will help make youths become agripreneurs. While the Government is supporting the sector significantly, the public-private partnership is essential for boosting the agriculture start-up culture in India, which could be a new engine for employment," said Shri Thakur. Dr Harsh Kumar Bhanwala, Chairman, NABARD revealed that the bank would fund around 100 agricultural and rural start-ups during current financial year which would boost innovations and farm entrepreneurship. He said that NABARD would infuse around Rs 1000 crore into agri and rural start-ups ecosystem. He said that a separate subsidiary company NABVENTURES floated by NABARD will help achieve this. NABARD has presently supported 16 Alternative Investment Funds (AIFs) with Rs 272 crore to finance over 50 agri enterprises. The newly launched NABVENTURES, to finance new start up enterprises, has already launched its first fund with a targeted corpus of Rs 500 crore with green shoe option of Rs 200 crore. The first closure of the fund is over with an investment of Rs 200 crore from NABARD. It will focus on investments in early mid stage startups in agriculture, agri tech, food and rural businesses.

## Getting Kisan Credit Cards has become cheaper

➤ To encourage more farmers to enrol themselves for Kisan Credit Cards (KCC), which help them access crop loans at subsidised rates, the government has decided to waive off processing fees up to a credit limit of Rs 1.6 lakh, a senior Agriculture Ministry official said. To get KCC, farmers were required to pay initial charges between Rs 2,000 and Rs 5,000. This was a major deterrent for them to enrol for KCC. "Following discussions with the States and other organisations, the government has decided to waive off these charges for up to Rs 1.6 lakh and levy only legal charges for amounts up to Rs 3 lakh," said Sanjay Agarwal, Agriculture Secretary, while addressing a conference of State Agriculture Ministers here. "Even though there are more than 14 crore farmers in the country, less than 7 crore have enrolled for KCC", he said, adding that the Centre, along with State governments, had launched an aggressive campaign to enrol an additional 1 crore farmers for KCC by August 31. Addressing the conference, Agriculture Minister Narendra Singh Tomar said that States have a bigger role to play in helping farmers make farming a profitable venture. The Centre has launched schemes like Pradhan Mantri Kisan Samman Nidhi (PMKisan) and budgetary allocations have already been made, he said. On the organic farming front, the Minister said that while many North-Eastern States are doing a good job, major agricultural States such as Maharashtra and Madhya Pradesh are still stuck with model projects.



## Nabard Plans to Raise Rs 55,000 cr this Fiscal

➤ Agri-lender Nabard plans to raise Rs 55,000 crore from the market this fiscal to fund its business and also support the various agricultural and rural development schemes of the government. "We plan to raise Rs 55,000 crore from the market this year," said Nabard chairman Harsh Kumar Bhanwala in Mumbai on Tuesday. "This amount will also include allocations made to meet shortfall in government schemes," he said. In addition to funding rural development schemes and supporting agriculture projects in the past, Nabard has also provided funding support to many government projects announced in the budget wherever there has been a shortfall. It has supported such shortfalls in allocations to the agriculture, water resources and the rural development ministries. The lender has supported the government's Swachh Bharat scheme, Pradhan Mantri Awas Yojana in rural areas and the Pradhan Mantri Gram Sadak Yojana in the past, among others. In its supervisory role of regional rural banks (RRBs), Nabard is preparing a framework for risk-based supervision of RRBs.

## Bengal Withdraws Fertiliser Subsidy for Tea Planters

► In an unexpected move to tea producers in West Bengal, the state government has withdrawn subsidy on fertilisers on tea. Planters fear that this will add an additional load of about Rs 200 crore to their total annual production cost. Cost of fertiliser constitutes a substantial portion of production cost of tea, which is a major economic pillar for the industrially backward foothills region of Bengal. The notification by the agriculture department has initiated a major stir in the tea producing belts. It is very unfortunate and a major blow on the ailing tea industry. We strongly protest this decision,” said secretary general of the Tea Association of India PK Bhattacharya. As per the notice, no seller will be allowed to sell fertiliser at subsidised rates to any tea plantation in Jalpaiguri district, the key tea producing area of the state. “I am sure Darjeeling and other districts of the state with plantations will also have the same directive soon,” said Bhattacharya. The two main components of fertilisers mostly used in the tea sector are urea and muriate of potash (MOP). According to Terai Indian Planters Association chairman Mahendra Bansal, one kg of urea costs Rs 6.5, after subsidy of around Rs 19. For MOP, the price is Rs 15 a kg, after a subsidy of around Rs 10. “Out of the average auction price of Rs 160 per kg, the cost of fertilisers accounts for 1.5% to 2% of the total production cost of tea. Without subsidy, this will go up to over 5% for the total processed tea output of around 380 million kg in Bengal,” said Bansal. The withdrawal will push up the annual fertiliser cost from about Rs 90 crore to nearly Rs 300 crore in Bengal, according to planters. State government officials refused to comment on the decision to withdraw the subsidy.

## Crop loan disbursement goes online in Rajasthan

► An initiative for online crop loan disbursement, launched here over the week-end, is set to extend a major support to farmers in the State, while the introduction of cooperative mobile ATMs will give them money at their doorstep. Chief Minister Ashok Gehlot inaugurated the new facilities here while affirming his government's commitment to farmers' welfare. Mr. Gehlot had announced establishment of a 1,000 crore fund for farmers' welfare in his Budget speech on Wednesday to pave the way for “ease of doing farmers”. While the fund will be utilised for getting remunerative prices for agricultural produces, natural farming will be promoted to reduce input costs and encourage traditional methods with an expenditure of 10 crore. Inaugurating the online disbursement facility, Mr. Gehlot called upon the farmers to go beyond farming and try to establish their own agriculture-based enterprises. He said the State government would support farmers in setting up food processing units, for which the requirement of land use change certificate would be waived. The Chief Minister announced that crop loans worth 16,000 crore would be disbursed this year, adding that the process for sanctioning fresh loans to farmers had started after their existing debts were waived. The State government will also open ‘Nandi Shala’ in every village panchayat to deal with the stray animal menace. Mr. Gehlot said there would be no shortage of seeds and fertilizers for both rabi and kharif crops and added that the new online system would simplify the process of distribution of loans and bring in transparency.

## CM Sarbananda Sonowal Reviews Paddy Procurement Mechanism

► Chief Minister Sarbananda Sonowal reviewed the paddy procurement mechanism of the Food, Civil Supplies and Consumer Affairs Department and other state agencies at his conference room at JanataBhawan. He emphasized on strengthening of procurement system of paddy from the state farmers and providing them the minimum support price (MSP) of the central government. Saying that there was urgent need to increase procurement of paddy from the state farmers to meet the 70 lakh Metric tonnes of rice requirement in the state per year, Chief Minister Sarbananda Sonowal also called for increasing rice production in the state and also prepare a database of the farmers for receiving fund from central government schemes. According to a press release, Sarbananda Sonowal directed Assam State Agricultural Marketing Board for surveying of suitable places for setting up procurement centres where farmers assemble and gather in large numbers. He also instructed for locating the godowns of Assam State Warehousing Corporation in different districts which can be used for storing procured rice and other items. Reiterating that farmers, FCI and different procurement agencies must have coordination among themselves to augment the paddy procurement, Sonowal said that Food and Civil Supplies Department must work closely with Agricultural Marketing Board till the time Civil Supply Corporations starts functioning. The chief minister also exhorted the Food and Civil Supplies Department to explore opportunities for signing MoU with the central government for decentralized procurement (DCP) programme.



## Farmers get major chunk in Madhya Pradesh budget

➤ Madhya Pradesh Finance Minister Tarun Bhanot increased the budgetary allocation for farmers by 145% over the previous year to Rs22,736 crore. Presenting his maiden budget in the Vidhan Sabha here, he said, "Under the loan waiver scheme, the State government has waived loans to the tune of Rs7,000 crore of 20 lakh farmers in two months. For the remaining farmers, Rs 8,000 crore will be set aside." To resolve farmers' issues and implement schemes successfully, Mr. Bhanot said the government has decided to set up a farmers' advisory council, comprising farmers' representatives. Moreover, under the Krishi BandhuYojana, farmers will be trained in farming techniques. To improve the income of those involved in horticulture and food processing, the State government has decided to launch a horticulture and food processing scheme, for which Rs 100 crore has been earmarked. The government has decided to cover fishermen and shepherds under the Kisan Credit Card scheme. For panchayat and rural development, Rs 25,015 crore has been set aside, which was 26 % more than the previous year's allocation, he said. Quoting scriptures to stress the importance of cows, Mr. Bhanot proposed to earmark Rs132 crore for cow welfare and three models to develop gaushalas in the State.



## Gujarat to set up separate fund to compensate farmers

➤ In a move to placate farmers, the Gujarat government will replace the existing crop insurance scheme and set up a separate fund to compensate them for crop failure. The state government has got an in-principle nod from the Union government to set up the fund, top sources said. While the details are yet to be worked out, the fund will have an annual corpus of more than Rs 3,000 crore. Sources said that the Centre has agreed to continue providing its 50% share of insurance premium paid to companies until now. The move comes on the heels of major unrest reported among farmers across the state who alleged high rate of rejection of claims by insurance companies and not settling claims for months. In 2018, farmers, the Union and state governments collectively paid Rs 3,031 crore, including Rs 365 crore paid by farmers, towards premium for crop insurance while companies reimbursed claims worth only Rs 2,050 crore. While private companies have been earning a windfall out of premium paid every year, the state government earned ire of farmers for inadequate compensation of their farm losses. Top sources in Gujarat government said CM Vijay Rupani, on his recent visit to New Delhi, had made a representation to the Union agriculture ministry proposing an alternative mechanism to compensate farmers for crop losses which was green signalled. The move comes on the heels of unrest among farmers across the state who alleged high rate of rejection of insurance claims.

## Kerala's tea output falls 36% in April-June period

➤ A prolonged drought and the absence of rain seems to have taken a toll on Kerala's tea production this year as output has dropped by 36 per cent during the first quarter (April-June) of the current season. Industry sources attributed the reason for the fall in output to the vagaries of nature in the period between February and June. Per the figures available with the Association of Planters of Kerala, tea production in the State during the period between April and June this year stood at 21.30 million kg compared to 25.25 million kg in the corresponding period last year. Climate change impacted the cost of production, which was steadily going up. A higher input cost also pushed up the cost beyond manageable levels, sources in the sector said. The current production cost hovers well above Rs 150/kg, whereas the average auction price realisation per kg was below Rs 105, which is about Rs 2 less than in the previous year. Sources said the difference between the cost of production and price realisation has been adverse. Normally, the first flush season in Kerala starts from the second half of April to first half of June. The second flush season commences from the second half of September to first half of November. The climate change seems to be having an irreversible impact on tea plantations. The weather cycle in tea growing areas is unprecedented and has caused severe damages to the cropping pattern. Moreover, abnormal weather conditions in and around Munnar between December 2018 and February this year also caused crop loss, which is estimated at about 15-20 per cent.





## Australia steps up sugar trade fight with India, moves WTO

▶ Australia has intensified its sugar related dispute with India by formally asking World Trade Organisation (WTO) to set up a panel to probe if the world's second-largest sugar producer was breaching its obligations, a media report said Friday. In March, Australia was joined by Brazil to lodge a formal complaint against India with the WTO, alleging that India's continued sugar subsidies to farmers have led to a "glut" and "depressed" global prices. Australia, along with Brazil and Guatemala, asked the WTO to set up the dispute panel to probe if India was breaching its obligations. Australian Financial Review report quoted Australian Trade Minister Simon Birmingham as saying, "India has not taken concrete action in response to Australia's long-held concerns and continues to provide subsidies in breach of its WTO commitments." "The longer these



unfair subsidies continue, the greater the impact will be on our hardworking Australian cane growers and millers and the regional jobs they create," he said. It says India's subsidies have contributed to a global sugar glut and hurt Australian farmers. Agriculture Minister Bridget McKenzie said, "This is about protecting over 40,000 jobs and the regional communities that are supported by our sugar industry." The Australian government's latest action is to support its 2 billion dollar sugar export sector. The federal government action has been welcomed by local cane growers and millers.



## Basmati rice exports rise to \$4.71 bn in FY19

▶ The country's basmati rice exports increased to \$4.71 billion in 2018-19 as compared with \$3.20 billion in 2016-17, Parliament was informed. Commerce Minister Piyush Goyal said promotion of agricultural products such as basmati rice is a continuous process. In volume terms, the exports increased to 44,14,605 tonne in 2018-19 from 39,85,210 tonne. Similarly, exports of nonbasmati rice also rose to \$3 billion in the last financial year from \$2.52 billion in 2016-17. Replying to a separate question, the minister said the top-10 destinations for the country's agricultural export include the US, Vietnam, Iran, China, the UAE, Bangladesh and Saudi Arabia. The main countries from where India mainly imports include Indonesia, Ukraine, Argentina, the US, Malaysia and Brazil.

## Coffee shipments down in June quarter

▶ Low prices coupled with weak demand from key overseas buyers have impacted India's coffee exports for the April-June quarter this year. Exporters said the outlook for shipments during the rest of the year remains bleak as the current crop is estimated to be lower than the Coffee Board's projections, while concerns linger on the forthcoming crop due to a truant monsoon. Provisional figures released by the Board reveal that volume shipments for the June quarter were lower by around 6 per cent at 1.023 lakh tonnes as against 1.084 lakh tonnes in the corresponding quarter last fiscal. In US dollar terms, the shipments dropped 16 per cent to \$227 million as against \$270 million in the same period last year. In rupee terms, exports fell 12 per cent to Rs 1,579 crore from the corresponding last quarter's Rs 1,806 crore. "The decline in volumes is mainly because of drop in instant coffee shipments. Shipments of arabicas are also down, but robustas are slightly better. The dip in international prices resulted in poor realisations. Also a lower crop had led to reduced shipments," said Ramesh Rajah, President of Coffee Exporters Association. The per-unit realisation also declined by around 7 per cent during the quarter on a slump in global prices. On an average, Indian exporters realised about Rs 1.54 lakh per tonne during the June quarter as against Rs 1.66 lakh in the corresponding previous quarter.

## Steep fall in foodgrains imports

▶ The country imported 2.78 million tonnes (mt) of foodgrains worth \$1.214 billion in 2018-19 against 7.52 mt with a value of \$3.342 billion in the previous year, Agriculture Minister Narendra Singh Tomar said in Parliament. The drastic drop was on account of lower imports of wheat and pulses, he said in a written reply to a question in Rajya Sabha. While India imported 5.61 mt of pulses and 1.65 mt of wheat in 2017-18, imports of pulses and wheat came down to 2.53 mt and 2,746 tonnes respectively in the previous financial year, he said.

## Brazil seeks WTO to set up dispute panel in case against India on sugar subsidy

▶ Brazil has sought establishment of a dispute panel under the aegis of the World Trade Organization (WTO) in a case against India's sugar subsidies to farmers. In February, Brazil and several other countries including Australia and Guatemala have dragged India into the WTO's dispute settlement mechanism alleging that New Delhi's sugar subsidies to farmers are inconsistent with global trade rules. Brazil is the largest producer and exporter of sugar in the world. "Brazil respectfully requests that the dispute settlement body establish a panel," according to a communication submitted by the South American country to the Geneva-based WTO. Brazil has alleged that in recent years, India has massively increased the level of domestic support under its support regime for sugarcane and sugar. For example, India has almost doubled the fair and remunerative price for sugarcane from Rs 1,391.2 per tonne in 2010-11 to Rs 2,750 per tonne in 2018-19, it has stated. That fair and remunerative price is the minimum price that, under Indian law, domestic sugar mills must pay sugarcane producers. It constitutes one of India's most important support measures for sugarcane producers. In addition, Brazil said some of India's states provide for higher minimum prices for sugarcane that local sugar mills must pay local sugarcane producers. Seeking consultation is the first step of dispute settlement process. If the two nations are not able to reach a mutually agreed solution through consultation, complainant requests for a WTO dispute settlement panel to review the matter. They had filed dispute under certain articles of WTO's Agreement on Agriculture, Agreement on Subsidies and Countervailing Measures and the General Agreement on Tariffs and Trade 1994. If the panel rules against India's sugar subsidies, India can approach the appellate body of the WTO's dispute settlement mechanism.

## Global Slump Crimps Cotton Yarn Exports

▶ Cotton yarn exports from India have come down by 22% in the first quarter as a global slump in demand and higher prevailing domestic cotton prices loom over the trade. Cotton spinning mills in India are resorting to partial shutdown as a squeeze in demand from China and Bangladesh has accumulated yarn stocks, a potential risk for millers in a dwindling cotton market. "The global cotton yarn demand is under stress as GDP growth in China has fallen and there are recessionary trends in major cotton markets including Bangladesh," Dr Siddhartha Rajagopal, executive director, Cotton Textiles Export Promotion Council, told. He said that the slide in export of cotton yarn is worsened by low margins in Indian cotton market due to higher domestic prices.



Rajagopal pointed that Indian cotton yarn manufacturers are also losing the global trade due to China's access to duty-free market in Pakistan and Vietnam. India is the world's largest exporter of cotton yarn and has major markets in China, Bangladesh, Pakistan, Vietnam and South Korea. Yarn export to China had gone up in 2018-19 as the largest importer of the natural fibre bought a third of total yarn export from India. The export has increased by 72% to Vietnam in the last year. This year, yarn exports are down to China, Bangladesh, Pakistan and European markets. The millers who are turning to domestic market are again feeling the heat due to a spike in duty-free garment imports from Bangladesh. The import of garments from Bangladesh has jumped by 82% in 2018-19 to \$365 million — much of it made from duty-free fabric coming from China.

## This Vegebot Uses ML to Harvest Lettuce

➤ Scientists have developed a vegetable picking robot that uses machine learning (ML) to identify and harvest a challenging crop. Machine learning is an application of AI that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. The 'Vegebot', developed by a team at the University of Cambridge, was initially trained to recognise and harvest iceberg lettuce. It has now been successfully tested in a variety of field conditions. Although the prototype is nowhere near as fast as a human, it demonstrates how robotics in agriculture may be expanded, even for crops like lettuce which are challenging to harvest mechanically.

## NCDEX to launch basmati paddy futures

➤ The National Commodity and Derivatives Exchange will launch futures trading in Basmati Paddy-Pusa 1121 from Wednesday. Introduction of this new contract will facilitate an effective risk management tool for market participants and provide a fair price discovery platform for the highly volatile basmati paddy, it said. Karnal, the core trading centre of Haryana, will be the basis delivery centre, while Sonapat is the additional delivery centre for Paddy futures contracts. The delivery lot size would be 10 tonnes, with a compulsory delivery option. Global rice production is about 501.5 million tonnes. India contributes about 23 per cent of global output with production of about 116 million tonnes. Known for its quality, global Basmati rice production is pegged at 9 million tonnes. India produces about 5.5 million tonnes and commands over 70 per cent of global output. Pakistan accounts for the rest of the global production. Of the overall paddy output in India, basmati accounts for about 5 per cent. Vijay Kumar, Managing Director, NCDEX, said the addition of a paddy basmati futures contract to the grain product basket is aimed at offering exhaustive and wholesome risk management to the market. Kapil Dev, Executive Vice-President (Business), NCDEX, said the Indian grain industry has been growing at a steady pace but is exposed to high price risks.

## ICAR releases dos and don'ts on tackling Fall Armyworm

➤ The Fall Armyworm (FAW), or *spodopterafrugiperda*, is the latest threat that the agricultural sector is facing. FAW, which wreaked havoc in Africa, entered Karnataka last year and spread very rapidly to other States. Though it predominantly infects maize, Fall Armyworm has the potential to spread to many other crops. The fact that it spread to 50 countries in two continents in just two years reflects the speed with which it spreads, causing large-scale damage to crops. While information on this new problem is not readily available, the Indian Council of Agricultural Research's (ICAR) centre in Meghalaya has come out with a 50-page compendium on FAW. It provides complete information on FAW — where it is born, how it devastated crops in Africa, its lifecycle and how to tackle it. "It is essential to prevent its infestation in the early stages. For this, farmers, extension workers, students and other stakeholders need to be sensitised to diagnose the problem well," an ICAR scientist said, adding that "efforts have also been made to provide the information on native bio-control agents and basic management practices to be followed in time." ICAR's North-East research facility took interest after the pest was first reported in March in Lunglei district of Mizoram and West Tripura district in Tripura. "Subsequently, it has detected massive outbreaks in April in Mizoram and Nagaland," he said.



## Organic farming acreage rises to 27.7 lakh hectares

➤ The total area under organic farming in the country has gone up by 20 per cent to 27.7 lakh hectares (lh) till date from 23.02 lh brought under chemicals-free cultivation last year, Parliament was informed. This includes 10.97 lh already declared organic under the National Programme for Organic Produce (NPOP), 8.41 lh under conversion, 5.98 lh under Paramparagat Krishi Vikas Yojana and 0.639 lh covered under Mission Organic Value Chain Development for North Eastern Region (MOVCDNER), Agriculture Minister Narendra Singh Tomar said in a written reply in the Lok Sabha. Madhya Pradesh with 7.55 lh under organic farming, or in the process of becoming organic, tops the list among the States. Interestingly, the area considered organic in the central Indian State came down from 8.12 lh in 2018-19, even though no reason was given why. The second place is occupied by Rajasthan with 4.11 lh under organic farming or conversion. In Maharashtra, the organic area is 2.84 lh, the Minister said. Another State showing significant progress in organic farming is Odisha. The MOVCDNER scheme, launched with the specific aim of increasing organic farming area in the North-East States, has helped convert an additional 63,860 hectares into organic farming till date. In 2018-19, the organic farming area under the scheme was 45,918 hectares, Tomar said.

## Sugar mills go for ethanol production

▶ Indian sugar mills are gradually shifting towards ethanol production in the wake of surplus sugar production in the last few years. Ethanol is increasingly becoming popular as a green, non-polluting fuel. According to an India Sugar Mills Association (ISMA) official, in the current season (October 2018- September 2019) so far, about 29.5 crore litres of ethanol have been supplied to oil manufacturing companies, and this is equivalent to sugar diversion of about 3 lakh tonnes. These mills have offered to supply 51 crore litres of ethanol, produced from heavy molasses/sugarcane juice for the first time, which will lead to a reduction in sugar production by 5 lakh tonnes. As per estimates, the overall sugar production will be 282 lakh tonnes in 2019-20 which is about 47 lakh tonne lower than the current 2018-19 production of about 329.5 lakh tonne. However, this is a preliminary estimate. After considering rainfall in July-September 2019, the water situation in reservoirs and satellite images, the ISMA will review the estimates. The government, on its part, has been asking sugar mill owners to switch to ethanol production to tackle the problems stemming from surplus production and falling prices. State governments are being asked to expedite the permission requests from sugar mills for converting from sugar to ethanol, within a week or so. Sources said it is not possible to reduce the surplus production of sugar and it is also difficult to change the crop patterns, and sugar mills are forced to decide whether they want to make sugar or ethanol from sugarcane juice. The Centre has formulated a consistent, transparent and long-term ethanol purchase policy. The ethanol economy in the country is Rs 11,000 crore and it is set to rise to Rs 50,000 crore in the next two years. Ethanol being a pollution-free, green fuel is getting popular gradually. Besides surplus production, the global market condition is also responsible for the situation.

## New way of predicting monsoon could help farmers

▶ Prediction of monsoon has been a tricky business, but scientists may have finally cracked the code. By the looks of it, a more accurate way of predicting monsoons could be within grasp. Knowing when the rains will arrive is important for farmers, for planning their next crop. The traditional way of forecasting monsoon has been by the application of statistical tools on historical rain data for broad predictions, which is not very accurate. Forecast of weather parameters such as temperature, humidity and the arrival of rains can be measured only days before. This is not very useful since farmers need to plan well in advance. Lucrezia Terzi, a researcher at the Belgian Nuclear Research Centre (SCKCEN), has come up with a new way of predicting the monsoon, by measuring how much Beryllium-7, an isotope of the element Beryllium, is present in the air. Presenting a paper on the subject at a science and technology conference organised in Vienna by the Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO) last week, Terzi said that she tested the method on Indian monsoon last year and was able to predict it accurately nearly two months in advance. The CTBTO held the conference to showcase how its technologies and system for detecting nuclear explosions can be applied elsewhere such as monsoon prediction.



## Nutrients in food crops will fall by 2050: Study

▶ Critical nutrients such as protein, iron and zinc in food crops could reduce significantly by 2050 due to climate change and rising carbon dioxide level, a new study has revealed. A report based on a study by the International Food Policy Research Institute (IFPRI) has said that over the next 30 years, climate change and increasing carbon dioxide (CO<sub>2</sub>) levels can impact the presence of nutrients in crops such as rice, maize, barley, potatoes, soybeans, and several vegetables. "The total impact of climate change shocks and elevated levels of CO<sub>2</sub> in the atmosphere are estimated to reduce growth in global per capita nutrient availability of protein, iron, and zinc by 19.5 per cent, 14.4 per cent, and 14.6 per cent respectively. In South Asia, iron and zinc availability is projected to be even below recommended levels," it said. The study finds that wheat, rice, maize, barley, potatoes, soybeans, and vegetables are all projected to suffer nutrient loss of about three per cent on average by 2050 due to elevated carbon dioxide concentration. It said the effects are not likely to be felt evenly around the world and many countries currently experiencing high levels of nutrient deficiency are also projected to be more affected by lower nutrient availability in the future.

# 9<sup>TH</sup> AGRICULTURE LEADERSHIP CONCLAVE & LEADERSHIP AWARDS 2019

Policy Push for Agriculture Reforms



The 9th Agriculture Leadership Conclave and Awards function organized by Agriculture Today Group, was inaugurated on 11th July 2019 by Dr Panjab Singh, President, National Academy of Agricultural Sciences. The event held at The Taj Palace, New Delhi had the presence of several other dignitaries such as Dr Douglas Ry Wagner, Global CEO, AlgaEnergy, Spain, H E Mr. Daniel Chuburu, Ambassador of Argentina, Dr Ashok Dalwai, CEO, National Rainfed Area Authority, Dr Srikanta K. Panigrahi, DG, Indian Institute of Sustainable Development.

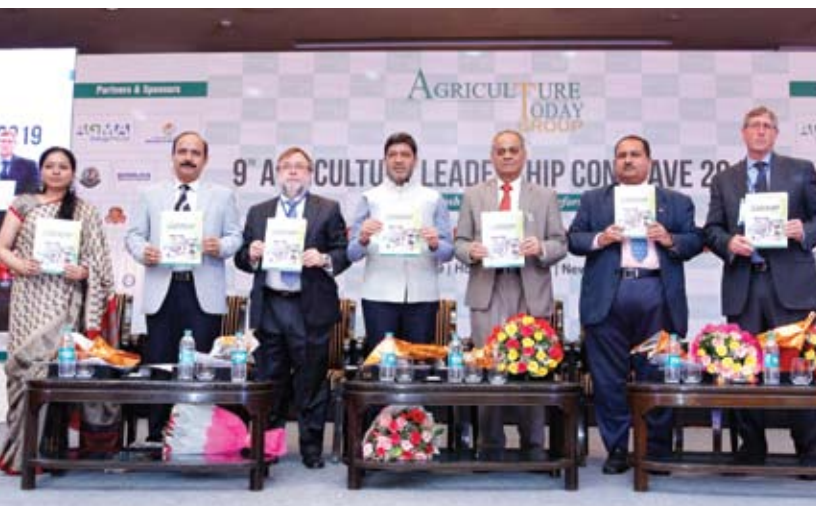
Dr M J Khan, President Agriculture Group welcomed all the esteemed dignitaries and expressed his deep gratitude to H.E. Justice P. Sathasivam, Hon'ble Governor of Kerala for his support as the chair of the organising committee. Dr Khan underlined the importance of reforms in agriculture and the relevance of technology in every aspect of supply chain especially at a time when the sector itself is facing unforeseen challenges such as climate change which affects mostly the small holders and the marginal farmers.



Precision farming, controlled environment agriculture production, artificial intelligence for the farm machines and national initiatives of crop insurance, market connectivity under eNAM, policy initiatives for exports, start-ups and advanced participation of banks, institutions and cooperatives have played a significant role in agriculture transformation. He concluded by pointing out that a positive change was felt in Honourable PM's vision of doubling the farmers' incomes by 2022 with focus on promoting agri-exports by special agri-export policy in 2018. "There is necessity for farmer's easy access to technology and market and also to shift from production centred incentives to market centred incentives which in

turn warrants political concerns over issues such as land reforms, market reforms. There is a need to bring together the key stakeholders to the same platform for the development for better rural practices and accentuate responses for competing with the global market," he said.

Prof. Panjab Singh, President, National Academy of Agricultural Sciences commented that agriculture in the present time is very different from the agriculture that was prevalent in the past and is going to change in the coming times. Innovation and transformation for agriculture will be central point for



all the discussions on agriculture and for the doubling of farmer's income. He points to the population growth as the major challenge to agriculture along with climate change. He laid emphasis on the part that in the past there was responsibility for production and productivity and now there is the added responsibility for conservation of the natural resources. "Further, attention is required on the crucial issue of water, where the popular slogan of 'conservation of water' needs to be critically understood in the case of agriculture. It is science that needs to address the issues relating to agriculture development and help in the futuristic agricultural practices," he reminded. Apart from the scientific innovations, he commented that, there is the need to create employment outside agriculture.

**Dr. Ashok Dalwai**, CEO, NRAA and Chairman, Task Force on Doubling Farm Incomes underlined the aspect of agriculture as an evergreen pride and first economic activity which has laid foundation for the modern civilization. He had pointed out that the new challenge in agriculture is not ensuring of food security, and commented that agriculture needs to get out from the focus on production. "The surplus production is opening up new opportunities. The two challenges and aspects that need to be given importance to are market and climate change to ensure that agriculture continues to sustain itself. The details regarding the aspect of market needs to be emphasised," suggested Dr. Dalwai. He proposed for the redefinition of market and urged to put in place a new situation where a farm producer, right from the farm gate, is able to reach out across the globe, where there is a demand.

He also emphasised on the need to take the burden of food security of the population off the farmers. He pressed for linkage of agriculture through industry, manufacturing and energy systems. Climate change also featured in his address where he stated the serious implications it has on agriculture.

**Dr. Srikanta K. Panigrahi**, DG, Indian Institute of Sustainable Development discussed on the need for the integration of climate change, energy, water and sustainable agriculture which are equally important. "In the tropical countries like India, climate change has resulted in constant rise in temperature, rise in sea level due to which coastline has been lost, villages and small islands being immersed in the sea. It has also contributed to the loss of several gracious agriculture species, particularly related to food produce such as rice. About 49 species of very sensitive rice has been lost due to climate change and many in the process of extinction," informed Dr Panigrahi. He also brought attention to the research works undertaken by the various research institutes and the research initiatives on the behalf of the government such as the National Mission for



Sustainable Agriculture which is absolutely committed for climate change. "It is also necessary for the practical research to be linked with the policies. The coordination of the central and state government programmes is essential for the attainment of a sustainable agricultural development. The approach that is required is to see from a common perspective with a right action plan and strong implementation of the policies," he said.

**Dr. Douglas Ry Wagner**, Global CEO, AlgaEnergy, Spain talked about the significance of innovations, especially biological innovations for safe and secure food. "Looking at the evolution of agriculture throughout the ages, certain dramatic changes are needed in the present time to find the solution and how we convince the farmers today to practice agriculture that could be beneficial in the long run. The solutions for the challenges in agriculture have to come from innovations and universalisation, biological based solutions for nutrition, crop protection and also for food production, provision of national means of resistance. Microalgae is one such innovation being promoted by MicroAlgae





Solutions in India," he said. He also suggested to find ways to make these products available to farmers and bear the charge of the farmer's needs.

**H E Mr. Daniel Chuburu**, Ambassador, Embassy of Argentina highlighted in brief the importance of collaboration of Argentina and India for food security. He informed that Argentina has vested interest in establishing a cooperation framework in India and the necessary MoUs has been signed to move diligently towards forming a good partnership with India. "Areas in which the cooperation has been proposed are in the field of productivity, technologies for productivity and in the field of cross-crop management. The country is in collaboration with the Indian authorities and in pursuance of that, Argentina is trying to establish a center of excellence in the field of cooperation in agricultural technology. The collaboration has been taking place with the Ministry



of Agriculture and Indian Council of Agricultural Research (ICAR) with an aim to work in diverse areas not only from Argentina but also from India to Argentina," he informed.

#### **SESSION 1: Fostering Farmer-Industry Partnerships for Agrarian Prosperity**

**Mr. Raju Kapoor**, Director, FMC India Private Limited commented that the partnership between the farmers and the industries has to be that of equals. However, Mr. Kapoor also addressed the issue that the relationship between the farmers and the industries is not very strong. He stressed on the fact that the role of the various stakeholders such as ICAR and that of the government is crucial in the establishment of the partnership between the farmers and the companies. The government has to move away from being the regulator to be a pacifier in establishing the link.



There is a serious need to create value chain based partnerships and every elements of the industry viz. fertilizer, crop protection, advisory, insurance, etc. all can integrate and work with farmers. He lastly suggested that the concept of consolidating the farmers in viable economic entities which are sustainable in the long term is very crucial and needs to be considered and adopted along with the complete removal of the intermediaries.

**Mr. Anil Kakkar**, Vice President, Excel Crop Care Limited commented that there needs to be a structured model to move away from the buyer-seller model. "The traditional wisdom of the farmers can be integrated with the scientific technology and knowledge for innovative ideas and better linkage between the farmers and industries. On the other hand, various tools are being used in bio-farming or the organic farming or zero budget farming and the integration of the various tools those are used, be it





the biological, technical, traditional, chemical, is required and can be achieved through partnership. Given the partnerships with the farmers, the industries can always advise the farmers on the proper use of chemicals and educate them on the use of legal seed varieties. These partnerships can definitely bring solutions and regulators for the facilitation of sustainable development," said Mr. Kakkar.

**Mr. RL Tamak**, ED-Sugars, DCM Shriram Limited commented that fostering farmer-industry partnership



is the key for development. He spoke about the association between sugar industry and the farmers which was an all year

round engagement, the resultant of which was the creation of multi stake holder partnership for a sustainable sugar plantation. "With the measures taken, there has been an increase in productivity of sugarcane and sugar by 20-30 percent in the last 3-4 years, saving 275 billion litres of water," he informed. Building of new successful infrastructure and the mechanisation are some of the other initiatives taken by the industry. He wrapped up the talk with the remark that this kind of partnership with inclusivity, multiple stakeholders on similar platform and with similar roles is required in every sector of agriculture.

**Jaipal Reddy**, Farmers leader, Telangana & South India Coordinator of All India Farmers Alliance remarked that it was high time that a partnership between the farmers and the industries was



established. "The farmers have been producing whatever the demand in market has been which has also led



to surplus production. Despite this, there has been import of several food products which can be easily produced in the country itself. The major challenge in the present time has been market. There needs to be integration of the central and state government to work for the support of the farmers to reach the market," he said. He also requested the industries to come forward to help the farmers by creating a market for the production in the field.

**Dr M J Khan**, President, Agriculture Today Group, who chaired the session, concluded by summarising the significant points of deliberation by the eminent speakers.

### SESSION 2: Role of States and Institutions in Transforming Agriculture

**Sudhir Kumar**, IAS, Principal Secretary, Department of Agriculture Bihar commenced his speech by stating the position of Bihar as basically an agriculture state with the



70 percent of the economy being directly and indirectly dependent on agriculture and allied sector. The first

agriculture roadmap beckoned the launch of several programmes like the seed extension scheme, seed gram scheme, and the thrust on bio-farming and use of agricultural equipment which laid stress on the availability of certified seeds for 23 crops. The second roadmap was to ensure the safety of foodgrains and nutrition, and to augment the income of farmers. The third and the most recent roadmap emphasised on organic farming by the creation of an organic corridor in the districts along the Ganga river, development of organic corridors off the national and state highways. He further stated challenges that were faced in the sector that included the farmers not receiving the benefits of the primary schemes. However, these challenges are addressed by interventions by the state such as digitalisation, direct benefit transfer, and e-wallets. For the benefit of the farmers an advanced subsidy of Rs. 6000 is provided. He further referred to several other schemes taken up by the government for the benefit of the farmers. In order to ensure the farmer's receipt of the benefits, the farmers have been registered in a portal through their respective aadhar cards and it is through the registration number that the farmers

availed the benefits.

**Mr. M K Mero**, IAS, Principal Secretary – Horticulture, Nagaland emphasised that the role of the state government is significant in the agriculture sector for the implementation of the schemes provided by the central government. “There is immense potential in horticulture in the north-eastern states of India and in the state of Nagaland, horticulture sector continues to remain the backbone of the State’s economy. This sector can be further developed in all the potential states with the support from the state government as well as the central government. The north eastern states should come up with new initiative to develop the concept of agriculture entrepreneurship. For this, agriculture graduates can be very crucial for innovations and marketing,” he opined.

**Dr. Elizabeth Saipari**, Director of Horticulture, Government of Mizoram Directorate of Horticulture stated the importance of horticulture in the state of Mizoram. “The state has worked towards encouragement for commercial cultivation of economically important horticulture crops, rehabilitation of the traditional jhumias on a sustained productive farming for the improvement of their socio-economic conditions and technological import for the practice of precision farming. Several challenges are faced in the agriculture sector in the region of north-eastern states in India such as the unavailability of the latest technologies and mechanisation, economic deprivation of the farmers, the issue of insurgency, and so on. It is the institutions and



the governments who can provide the support for the applicability of the viable technologies and deal with the other issues for the development of the farmers and the agriculture sector,” he said.

**Dr. P. Chandrasekhara**, Director General, NIAM was of the opinion that agriculture training is one of the major activities that needs to be carried out with a shift in focus from agriculture production to agricultural marketing which is going to be one of the principal elements of the agriculture sector today. “Development of market-driven production is necessary, with initiatives taken by induction programme in training, national facilitators’ development program on how to mainstream marketing in the institution,” he said. Another measure suggested by the director is the shift from the product led extension to market led extension. “There is a need to focus on the action led research and it should include the areas of marketing and processing as well as the analysis of the income before and after the implementation of the schemes and experimentation to know the effectiveness of the scheme,” he stressed.



**Sh. Anand Bhaskar Rapolu**, Ex-MP and Chairman ICFA Working Group on Farm Distress, who chaired the session, summarised the important points raised in the session. He stressed on the issue of monsoon collapse and the promotion of zero investment farming where the state has important role to play.



### SESSION 3: Augmenting India’s Agriculture

### Competitiveness for Global Trade

**Dr. N K Dadlani**, Advisor, ICFA focused on seeds and the restrictions on GM technology in the Indian trade environment. He called for regulation of illegal trading of potential agriculture goods.



**Mr. Asitava Sen**, CEO, Croplife India drew attention to the identification of India’s competitive advantage in certain crops for exports. “Steps need to be taken to help accentuate the high productivity of such crops and one such element is crop protection. In terms of import, India needs to follow a standard codex like the EU. Stricter regulations for chemical registration should be present, and it is an issue for which both the government and the industries need to coordinate” he pointed out. He also emphasized on the importance of high quality seeds and innovative products for farming. “There are various regulatory practices that stand in the way of ease of doing business. The inaccuracy of the data production in the ease of doing business hampers the industry from approaching the farmers” he mentioned. Lastly, another factor that Mr Sen highlighted was the reuse of the chemical leftovers by the farmers which harms the crops and eventually the presence of harmful chemicals in food that has led to its rejection in the global market.



**Dr. Maharaj Muthoo**, President, Roman Forum, Rome also pointed out the quality assurance for the agriculture





products to strive in global marketing. "The quality control measures to ensure that food products meet certain safety and quality standards play a key role in development of agricultural exports. There needs to be regulations implemented in the management, production and inspection processes. Quality management practices in India will help in ensuring proper marketing of the surplus food production as it has become more important than food security in the present times. Also investment in the marketing of the agricultural products should be kept in priority after the assurance of quality food production to increase the exports in the global market," he said.



**Mr. N Ravishankar**, Chairman, ICFA Working Group on Agri Marketing emphasized on the long term approach

for building up the market for competitiveness in the global scenario. "There is a need to give

attention to certain areas or regions and specific crops for the purpose of quality production and marketing across the world," he advised. He also stated that in India the entire challenge of the market is left outside the farms and in agriculture the producer is the mute spectator. The competitive system that should be present for assurance of quality products is missing in the market. He suggested that there is the need to set up a fare-trade board, institutes like bargaining councils for proper regulation of the food quality to maintain the standards necessary to compete in the global market. The farmers need to take leadership in marketing as well and the action for global marketing needs to be taken to the mandis.

**Dr Dinesh Chauhan** Director and CEO, IACG deliberated on the necessity to give incentives to the farmers and to spread awareness among the farmers on the recent trends and opportunities in the national



and international market. "There are 99 countries in the world that ranks high in the ease of doing business index, with India rising to the rank of 77th. Such information along with the demands in the global market has to be provided to the farmers for establishing a national market and accentuating the competitiveness in the global market in agricultural goods. Steps need to be taken towards marketing, connecting, building infrastructures such as cold-chain market for making the agriculture sector globally established. The push for the industry and the products of agriculture is required to create global brands and for that the export policies also needs to be eased off," suggested Dr. Chauhan.

The session ended with the concluding remarks from the Chair, Ms Fariha Ahmed, Managing Editor, Agriculture Today Group. She agreed on the issues such as low farm productivity, poor infrastructure, global price instability, limited market access and lack of awareness in the agriculture sector. She emphasised on the need to promote



the agri-exports for which there must be building of global value-chains for certain important agri-commodities. To serve the purpose the government of India needs to adopt an open, stable and reliable export policy. Further, India should adopt farmer oriented strategies to attain the purpose of food security and emerge as an outstanding exporter of agricultural products in the world.

#### SESSION 4: Connecting Farmers to Markets and Technologies

**Mr. Yogesh Dwivedi**, CEO, Madhya Bharat Consortium of FPCs Limited brought up the factor of commodity trading in agriculture. He identified the challenges that are faced in the case of commodity trading such as the complexity involved for the industry or the company in connecting with the farmers in the rural areas. "The complexities arises with the change in the government



officials in the departments through which the connection is maintained, unwillingness of the young agriculture graduates and officials to work in the rural areas to establish the links, and so on. The ground level work is necessary to work with the farmers and the connection or linking with the latter for marketing and provision of adequate technologies is a workable model that needs to be developed," he said.

**Mr. Jatin Singh**, MD, Skymet Weather P. Limited stated in the initial stage itself that everyone has different perspectives regarding the



evolution and the issues concerning agriculture. He emphasised on two things – climate change and correct collection and analysis of data for the success in the agricultural linkages. While talking about data, he stressed on the use of the correct data to find solutions. "New mechanisms need to be developed so that the figures can be collected correctly and tampering with the data made impossible. Further, work needs to be done on the discrepancies

which have already occurred while collecting as well as analysing of the data," he reminded.

**Mr. RG Agarwal**, Chairman, Dhanuka Group said that the laws and regulations that are made by the government are not beneficial for the farmers and on the contrary, those laws have harmed them



instead. "There is an urgent need for the practical implication of the policies and agendas formed and discussed in the conferences and forums. To pave a way for the connection with the farmers, there should be freedom that needs to be given to them. A follow-on public offer (FPO), which is the release of shares to investors by a public company, should be implemented," said Mr. Agarwal. Talking about agri-inputs – he addresses the issue of the fake agri-inputs available in the market. He emphasized that there is a need to move beyond the theoretical discussions on the issues and take practical actions to solve the problems that have been prevalent in the agriculture sector.

Dr M J Khan who chaired the session had commented that, the



knowledge about the Indian farms and farmers needs to be researched before forming a model by the government or the industries. There is also a need to maintain the purity in the products, rather than using the GM seeds for better marketing. It is time that the products maintain the brand name it has earned. Moreover, the changes in the regulations by the government are creating harm for the farmers and the market. Dr Khan concluded the session by summarising the points raised by the distinguished speakers and urged the industries and the government to ponder over the issues that had been highlighted and work on the solutions that have been recommended with it. He particularly emphasised that there is no dearth in the technological innovations in the country for the development of agriculture. But the concern that has been prevalent is the inability of the new technologies to reach the grass root level.

#### SESSION 5:

#### Precision Technologies for Profitable Farming

**Mr. Debabrata Sarkar**, MD, MicroAlga Solutions Pvt. Limited discussed about data collection and

analysis and the use of the required input for agriculture production in precision technology. He raised the issue of the amount of wastage in the production of agriculture goods. He suggested that these are the first and the foremost questions that need to be understood



if there is an aim to develop a sustainable agriculture system in the country. His suggestion included the requirement of government intervention for the technologies that are developed to the farmers. "With the current climatic conditions and huge waste of resources as well as the need to spread the awareness of the demand for the quality food in the market, the farmers need to utilise the precision technologies to develop and compete in the global market," he said.

**Dr. Swamy Pentylala**, Managing Director, Baker Tilly, UK insisted that the help provided to the farmers is not for others but it is for helping ourselves. The significant concern now is food safety. Dr Swamy also cited the challenges that are faced in agriculture production viz.



climate and data collection. He said that there is the need to provide farmers with right and precise information to remove the complications which would avoid vast data input and confusion.

**Mr. Naresh Modi**, Project Director, NCPAH also underlined the use of data and analysis for precision farming as the significant requirement and element. Drawing the attention towards water



conservation he said, "There should be proper establishment of facilities for rain water harvesting which can be used for the

purpose of irrigation. There is a great scope for rain water harvesting and steps need to be taken to make the people aware of the appropriate use of water and proper management. There can be popularisation of drip irrigation, which is the most efficient water and nutrient delivery system for growing crops without the excess use of water. With the increase in



the requirement of water, steps are taken by the government in certain regions to build water harvesting ponds and the schemes to promote it". He further talked about bio-field or biological field, a complex organising energy field engaged in the generation, maintenance, and regulation of biological dynamics. "In a country like India there is heavy use of chemicals such as insecticides, however the country should move towards the use of other technologies available and ideas implemented by the other countries in the world for producing a more safe and quality foods. The alternative ideas should be considered at the present times with the new technological innovation taking place all over the globe. Digitisation of land can also be helpful in providing the data required to use precision technology in agriculture production," he added. Lastly, he emphasised on the implementation of the policies to reduce imports of pulses and oil seeds and concentrate on the export of the excess water which can be saved through harvesting and proper management.

**Dr. M Moni**, Chairman, ICFA Working Group on ICT and former DG, NIC said, "The future of agriculture will be digitalisation and it will be the core for the implementation of the precision farming. There is requirement for



strong land based information in agriculture with the establishment of - farmer-based database and data-based farmer. In a country like India, bringing in digital based farming is a difficult proposition". He also pointed out that there needs to be - smart irrigation farming and smart tribal farming.

**Dr. K L Chadha**, who chaired the session, pointed to the fact



that there is increase in the cost of production in the agriculture sector. Moreover, there is also increase in the deterioration in the health of the population of the country due to agricultural products. And to find a solution for the problems, there is a requirement to aim at the deduction in the cost of production, reduction



in the harm to the nature through the use of the chemicals and excess use of natural resources and use precise and regulated amount of agrochemicals in the crops for ensuring the quality and safety of the food products. He suggested the use of physical, chemical and biological means for production and the use of technology with skill development that is essential for development and implementation of precision technology in agriculture. The gap in the use of technology is ever present in India.

#### SESSION 6: Political Vision for Empowering Farmers

**Sh. Kunvarjibhai Bavaliya**, Hon'ble Minister of AHD, Gujarat introduced steps taken by the state government to the development of Animal husbandry and dairying sector. He



pointed to the need of technology for further development in the sector. He further suggested that there is the need to replicate the animal husbandry schemes of Gujarat in other states.

**Dr. Prem Kumar**, Hon'ble Minister, Department of Agriculture, Government of Bihar highlighted the agriculture potential in the state of Bihar and stated that it is an important source of wealth in the State with about 79% of its population engaged in agricultural production. The effect of climate change has been a major



drawback for the agriculture production that has affected the farmers. He stated that the state government has taken up the scheme of Per Drop More Crop that which has enrolled 76 percent farmers through registered. Kisan Choupal also has been implemented in the state.

**Mr. O.P. Dhankar**, Minister, Haryana Agriculture, Development and Panchayats pointed out that in a long time agriculture has not been prioritised in the mainstream



discussion and news, and less work has been done in the sector. There has been deterioration of the economic status of the farmers. He further highlighted the issue of water in the state that is deficient for agricultural use and in order to tackle with the issue micro-irrigation has been promoted.

**Sh. GVL Narasimha Rao**, Hon'ble Member of Parliament stated that by the 2007 recommendation, Minimum Support Price (MSP), has been implemented by the present government which is a market intervention by the Government of India to insure agricultural producers against any sharp fall in farm prices. Some of the initiatives and recommendations of the present government in the sector



is Direct Benefit Transfer to farmers, doubling of farmer's income, long term irrigation fund and disaster relief. He also pointed to the fact that for the successful implementation, awareness about the scheme is crucial and farmer's opinion is required in policy making.

Dr M J Khan, who chaired the session, underlined the important points raised by the speakers. He commented that the political visions that have been stated can change the landscape of agriculture. He also noted that the consistently growing performance in agriculture in the state of Bihar is remarkable, however, the potential of Bihar is not recognised in the national level and there is need to promote its significance in the sector. Further commenting on the topic, he remarked that committed politicians with long term vision and dedication are needed for the development of the agriculture sector.

# 9<sup>TH</sup> AGRICULTURE LEADERSHIP AWARDS 2019



**H**.E. Justice P. Sathasivam Hon'ble Governor of Kerala, Chairman of the Organising Committee of the 9th Agriculture Leadership Conclave and Leadership Awards 2019 opened the speech by thanking and complementing the organising committee and the President of the Agriculture Today Group for organising the conclave. He congratulated the different awardees and he stated that behind every award there is an inspiring success story. He further stated that the inspiring stories of success are a huge motivation to the present population for inspiring development in agriculture. He noted that with a vast area of cultivable lands, India has vigorously contributed to the global food security. With the declaration of agri-export policy of 2018, there is certainty in the further expansion of Indian market in the world and gain considerable returns. Technology and mechanisation has contributed a lot in the evolution of agriculture. Use of less water and better production method is the key for development and schemes like Pradhan Mantri Krishi Sinchayee Yojana have encouraged the rapid adoption of new irrigation technologies. Agriculture is still in need from the pressure of reducing resources for agriculture production, emergence of new pests and diseases and falling prices. It is the innovators and the leaders who can take the responsibility to help the farmers and the agriculture sector to deal with the problems and develop the quality of the produce to meet the international standards.

Sh. Narendra Singh Tomar, Hon'ble Minister of Agriculture & Farmers Welfare and Minister of Rural Development in his address promised to introduce smart farming and create smart farmers. He stated that the government is open to improve the welfare schemes. With the new government's initiatives, there has been change in the mind-set of the people and more educated people are starting to engage in the field of agriculture and are using technology to develop the agriculture production. He asked the states to help farmers in the production process and make agriculture a more profitable business. He stated that the states can make efforts in increasing crop remuneration by helping farmers in reducing input cost and also helping in the increase of production and promotion of exports. He also highlighted the need for better water management and waste management of resources.

The innovators and leaders were felicitated in the award ceremony.





### FARMING LEADERSHIP

Sh. Om Prakash Dhankar, a veteran politician and a visionary leader has inspired innumerable sweeping changes in Haryana's agriculture. By keeping farm growth and profitability, as the guiding principle, he was behind many path breaking policy interventions. As the Cabinet Minister of Agriculture & Farmers Welfare, Development & Panchayats, Mines & Geology, Animal Husbandry & Dairying and Fisheries at Haryana, Shri Dhankar expertly identified ways to expand resources and implement several schemes for the development of agriculture in Haryana. Implementing several schemes and utilising government resources for the development of agriculture and related sector in Haryana, he made sure that the state was abreast with new technologies. Realizing the potential of fisheries in increasing farm incomes, he played an important part in increasing budget allocation of the Fisheries Department from Rs 5 crore to Rs 16 crore. Batting for implementing Swaminathan Committee Report, he constantly exhorted the farmers to invest in allied sectors to diversify their income sources. Shri Dhankar, in relentless pursuit of farmer's welfare and strong commitment for long term development has turned the agriculture fortunes of Haryana.



### YOUNG SCIENTIST

Dr. Shravan M Haldhar, Scientist at Central Institute for Arid Horticulture, Bikaner, have made outstanding contributions to the development of pest management techniques for the horticulture sector. The young scientist with a doctorate in Agril Entomology has collected and identified around ninety-five insect species of arid horticulture crops in arid and semi-arid regions, in which eleven species are new host recorded. Dr. Haldhar has five varieties of vegetables - Thar Karni (ridge gourd); Thar Seetal (long melon); Thar Tapish (sponge gourd); Thar Hariparna (palak) and Thar Sundari (ivy gourd) to his credit. He has also registered one muskmelon genotype (AHM/BR-8) in NBPGR, New Delhi. This dynamic scientist has developed 21 technologies related to insect-pests management

strategies for arid horticulture crops and has applied for one patent for the biopesticide "TharJaivik 41 EC". Dr. Haldhar has submitted seven new DNA Bar-coding sequence data of arid horticulture crops insects to Gen Bank NCBI, USA. With 34 research papers, 16 books and several technical bulletins in his name, Dr. Haldhar is a recipient of several honours and awards. In a short career span of 12 years, this young researcher has established himself in the horticultural scene of the country and holds a promising future.

### TECHNOLOGY LEADERSHIP

AlgaEnergy, a biotechnology-based company with the mission to develop and commercialize innovative high-quality products derived from microalgae has a lineage of ten years of research. AgriAlgae, launched after intensive years of research is a range of high quality biostimulants combining different microalgae species in the agricultural sector. With a global monopoly in the circular business model in using real CO<sub>2</sub> from other industries as the main nutrient to grow its microalgae, AlgaEnergy has been recognised by the exclusive Seal of Excellence issued by the European Commission. Awarded the prestigious European Business Awards for the Environment by the Biodiversity Foundation under the Ministry of Agriculture, Food and Environment, they have been able to generate high-quality innovative products targeting specific needs. As a new initiative in India, AlgaEnergy and Krishi Rasayan Group had recently announced a joint venture, AgMA Energy, to bring new agricultural solutions for key markets with MicroAlgae Technology. This joint venture between MicroAlgae Solutions India Pvt. Ltd, (a subsidiary of AlgaEnergy S.A.), and AgroLife Sciences Corporation, part of KrishiRasayan Export Pvt Ltd (KREPL), is set to rapidly bring new solutions at the interface between biology and chemistry to important agricultural markets.



**DR. MONI MADASWAMY**

Dr. Moni Madaswamy, Chairman, ICFA Working Group on ICT and former Director General, National Informatics Centre, commands 35 years of experience in the field of e-Governance and Informatics. A Distinguished Technocrat and Eminent Informatics Scientist in the area of "e-Governance, Informatics and Agricultural Informatics" in India, he has held prestigious assignments, including sharing important responsibilities as Principal Systems Analyst to the Former Finance Minister of India, Hon'ble Shri V. P. Singh. In his eventful career spanning several decades, Dr. Moni has deeply been involved with agriculture sector, associating with 13 research and development projects on survey and identification of insect-pests of arid horticulture; Insect Taxonomy; Host Plant Resistance (HPR) study, development of IPM modules for arid horticulture crops, grasshopper taxonomy and development of IPM/IRM modules in cotton. Currently serving as Professor Emeritus and Chairman, Centre for Agricultural Informatics and e-Governance Research Studies, he was instrumental in establishing Centre for AgriBusiness and Disaster Management Studies, and Centre for Industry 4.0 Technology Studies and Applications (CITSA), in Shobhit Deemed University Meerut (Uttar Pradesh). He continues to support technological advances in agricultural sector.

**RESEARCH LEADERSHIP**

Dr. Renu Swarup, the Secretary, Department of Biotechnology, Government of India, has served in Department of Biotechnology for nearly 29 years. A post doctorate from The John Innes Centre, Norwich UK, Dr. Swarup's principal area of research has been Genetics and Plant Breeding. She was also closely involved in programmes and activities related to Bioresource development and utilization, Energy Sciences and in Women & Science. Dr. Swarup was actively engaged in the formulation of the Biotechnology Vision in 2001, National Biotechnology Development Strategy in 2007 and Strategy II, 2015-20 as the Member Secretary of the Expert Committee. In addition to her current role, she holds the position of Chairperson, Biotechnology Industry Research Assistance Council

(BIRAC), a Public Sector Company incorporated by the Government to nurture and promote innovation research in the Biotech Enterprise with special focus on Startups and SMEs. Honoured with several awards, this researcher turned bureaucrat is also a fellow of the National Academy of Sciences (NASI) India. Dr. Swarup's vast contributions in the research and development of biotechnology in the country has provided a significant impetus for agricultural development.

**ACADEMIC LEADERSHIP**

Amity University, Noida has earned a reputable position as an institute of academic excellence in agriculture and allied sectors. The university has been persistent in facilitating research in frontier areas of agriculture. Amity offers an interdisciplinary environment to the faculties and PhD scholars to develop low-cost technologies for the benefit of the Indian farmers. This illustrious institute has been in the forefront in facilitating an environment to nurture valuable professional human resource in the area of plant and agricultural science to deal with crucial issues such as food security, environmental friendly and sustainable agriculture, nutritional security etc. With a gamut of courses ranging from graduate, post-graduate to diploma courses in Agriculture, Biotechnology, Horticulture, Plant Protection, Food Technology, Herbal Science, Microbial Technology, Foods & Nutrition, Agri-business, Environmental Management, Agronomy etc., Amity has ensured a steady flow of highly qualified and able professional work force to man the agriculture sector. The university's interdisciplinary research in the fundamental and applied aspect of plant science and agriculture with strong focus on innovation have left an indelible impact on the farming community and society.



**DEVELOPMENT LEADERSHIP**

A not-for-profit industry association, NASSCOM, is the apex body for the 154 billion dollar IT BPM industry in India, an industry that has made a phenomenal contribution to India's GDP, exports, employment, infrastructure and global visibility. Established in 1988, NASSCOM's relentless pursuit has been to constantly support the IT BPM industry in India, in the latter's continued journey towards seeking trust and respect from varied stakeholders, even as it reorients itself time and again to remain innovative, without ever losing its humane and friendly touch. With their initiative



of "working with diverse stakeholders to build focused initiatives that enable the growth of the sector through policy advocacy, skill building, research, startup programs, facilitate business and increase industry outreach", NASSCOM is dedicated to expanding India's role in the global IT order by creating a conducive business environment, simplifying policies and procedures, promoting intellectual capital and strengthening the talent pool. NASSCOM has built a symbiotic relationship with the Government of India on key issues relating to this sector.

**ENTREPRENEUR LEADERSHIP**

Mr. R Tamil Selvan, Chairman and founder of Salem RR Biryani, Chennai, is a food entrepreneur, philanthropist and a visionary. Developing his passion into successful entrepreneurship, Mr. Selvan is today a well known name throughout Chennai. Hailing from a small village, Edappadi in Tamil Nadu, he had the zeal to work even from a very young age. Enduring hardships, Mr. Selvan became an entrepreneur at the age of 23 aided by innate skills and ardour for cooking. His initial enterprise was built on a pushcart ten years ago and today he is the proud owner of Salem RR Biryani, a popular chain of biryani outlets in Chennai, with 21 branches selling



17000 – 20000 kgs of Biryani every day. A biryani master by experience, his culinary skills are on par with his humanitarian deeds. A humble person, connected to his roots, Mr. Tamil Selvan's guiding principle is, "One has to help those in need, instead of being blinded by greed". His positive outlook towards life and his dedication to improving the living standards of himself and those around him has helped him achieve admirable success in life.

**INDUSTRY LEADERSHIP**

An Industry giant, EID Parry Limited with a history of 230 years in agribusiness is a brand and market leader. Predominantly engaged in the business of manufacture of sugar and by-products, the company operates through six factories spread across the states of Tamil Nadu, Andhra Pradesh and Karnataka. Sugarcane, being the primary raw material for its operations, EID Parry, closely associates with farmers in the supply chain through sustainable initiatives and innovative technologies ensuring inclusive growth. Credited for its farmer centric agri services, EID Parry constantly promotes many novel products, schemes and programs in sugarcane cultivation. The company pioneered the establishment of a state of the art agriculture R&D facility and extension department for sustaining the challenging sugar business with the core purpose "to enrich life by creating value from agriculture" and is today a leader in the industry / country to have an integrated R&D and extension service program dedicated exclusively to serve its farmers. In the largest agro- industry of the country - "SUGAR", EID Parry is a shining beacon in leadership for innovation and promotion of best practices in agriculture on all fronts.

**AGRIBUSINESS LEADERSHIP**

Ascen HyVeg Limited "The Fastest Indian Growing Company in Vegetable Seed Sector" is ranked as number one regional company in India and number sixth in South and South East Asia. With a broad vegetable seed portfolio that includes open-pollinated varieties alongside hybrids in 21 vegetable crops, the company also focuses on developing disease resistant hybrids. With 4 million satisfied farmers from one lakh villages as its customers, Ascen HyVeg is on an incredible growth trajectory. Ascen HyVeg Limited with more than \$25 million turnover, has a dependable export



market in Thailand, Vietnam, Bangladesh, Sri Lanka, Pakistan, Nepal Myanmar and Indonesia. It was the first company to release Indian bred cabbage, carrot and cauliflower hybrids. Their hybrid varieties in Chilli, Tomato, Cucumber Bitter Gourd, Bottle gourd, Snake gourd, Pumpkin, Watermelons, Melons and Okra were heavily sought after by the farmers and in time have emerged as popular varieties. In 2017, Ascen HyVeg expanded portfolio to include row crops and started breeding in three field crops - Corn, Millet and Rapeseed Mustard. Armed with constantly evolving innovative and inventive products, Ascen HyVeg has emerged as a top seed company.

**INNOVATIONS LEADERSHIP**

Pioneers in innovations and technological up-gradation, Sonalika ITL has over the years swiftly outpaced both domestic as well as international brands. Sonalika's ease at customizing products has resulted in the development of 1000+ variants in the heavy duty tractor ranging from 20-120HP. Sonalika ITL is the only Indian company across categories which is present in 35 European National markets, and over 120 countries with No. 1 position in 4 countries. Sonalika ITL is known for introducing the 120 HP tractors to the global buyers and pioneering world class

technologies like CRDi complying with the stringent international norms. Sonalika Group believes in the concept of growing together and is striving to achieve commanding position in world economies of Asia, America and Europe, while going hand in hand with the Government's "Make in India" vision. This approach has led Sonalika to be chosen by the Govt. of India as a contributing partner with NITI Aayog which aims for doubling farmer's income by the year 2022. While touching million hearts, Sonalika has uncompromisingly catered towards the development of the society and inspired farmers to excel in their fields.

**CORPORATE LEADERSHIP**

FMC APG, leaders in the Agro Chemical Industry in India, has built a strong business base with quality products, broad international presence and effective market access. With a wide portfolio consisting all major classes of crop protection chemicals, FMC APG has been leading a winning battle against broad spectrum of insects, weeds and diseases.

With powerful brands, extensive distribution network, expertise in local markets, crop / non-crop segments, successful strategic alliances and state of the art R&D facility in Bangalore, FMC APG has emerged as leaders in this highly competitive segment. Their unique farm solutions have helped millions

of farmers to grow more food and to meet the burgeoning demand of the population. With the acquisition of Cheminova A/S, a multinational crop protection company based in Denmark and a wholly-owned subsidiary of Auriga Industries A/S, FMC APG will intensely focus on agriculture, health and nutrition end markets. With Cheminova's highly complementary product portfolio and geographic footprint, FMC will be able to broaden its Agricultural Solutions portfolio which will significantly strengthen their market access.



**CSR LEADERSHIP**

With the vision to 'Putting India First' with the credo of 'Sab Saath Badhein', ITC Limited Agri Business Division has integrated sustainability as the foundation of the corporate strategy. ITC ABD's association and engagement with Indian Agriculture is of over ten decades. One of India's largest integrated Agri-Business enterprises in the country, they have a significant presence across every node of the agri value chain – R&D, Crop Development, Procurement, Supply Chain, Processing and Marketing. Spanning operations across 200 districts that cover over 30 crops, the company

has also spurred rural transformation through ITC e-Choupal empowering over 4 million farmers through 6000 eChoupals across 35,000 villages and 23 Choupal Saagars. ITC ABD has been empowering farmers by fostering and strengthening the crop value chains in wheat, milk, fruits and vegetables, potato, spices and coffee segment with the help of successful brands of ITC. The company has been influential in reinforcing and enriching the rural ecosystem and thereby ensuring economic development of the country. ITC has maintained a close working association with grass root level institutions, community-based organizations and government partnership for promoting climate smart and sustainable agriculture practices.

**BEST AGRICULTURE STATE**

Bihar, a principally agrarian state, has made major strides in the agriculture segment. With technological intervention and visionary policy support, Bihar has emerged as number one in the eastern region of India in terms of agriculture growth. Bihar is among top 5 rice and wheat producers in the country and has topped in the yield rate of rice. Bihar is the 3rd largest producer of vegetables, which is dominated by potato, onion, eggplants and cauliflower.



In fruit cultivation, it is largest producer of Litchi and 3rd largest producer of pineapple in the country as well as major producer of Mango, Banana and Guava. Food processing, dairy, sugar, manufacturing and healthcare are some of the fast growing industries in the state. Organic agriculture has been accorded prime importance by the government. The state has attained self-sufficiency in food grains production. Agriculture is the single largest private sector occupation in Bihar and the agriculture policy in the state has been to increase productivity of major crops so as to bring it close to national average by the opening up of markets.

**BEST ANIMAL HUSBANDRY STATE**

Gujarat has displayed a stellar performance in the development of animal husbandry sector by strengthening animal health services and increasing livestock production. The Animal Husbandry Department undertakes numerous activities associated with scientific rearing of domestic animals, disease control and prevention of infectious diseases of poultry and animals, preservation of indigenous breeds etc. Rigorous efforts of Government of Gujarat has resulted in registration of new breeds viz., Kharai Camel, Kachchhi-Sindhi horse, Kahmi Goat, Panchali Sheep and Halari Donkey by NBAGR. Bestowed with large number of indigenous pure breeds, the state has 23 registered



breeds. The constant efforts of Gujarat government led to the notification of Standards of "Camel milk" as food item which impacted the procurement and the processing of the camel milk benefitting the camel owners of Kutch of Gujarat. Initiatives such as 'Chocolate from Camel Milk' initiated by AMUL in Gujarat was also impactful. 'Animal Health Camp' has remained a flagship programme of the Department which has witnessed a steep increase in the number of beneficiaries since its inception in 2002. The contribution of the state of Gujarat in the arena of animal husbandry has been incredible and was contributory in enhancing farmers' income.

**BEST HORTICULTURE STATE**

Mizoram nestled in the north-eastern part of India, is a biologically diverse region with excellent soil and climatic conditions suitable for the cultivation of a wide variety of horticulture crops. With progressive policies implemented by Department of Horticulture under various CSS schemes such as MIDH, PMKSY, RKVY and Mizoram State Flagship programme NILUP/NEDP, horticulture in the state is revving up slowly but steadily. Mizoram is one of the first states in India with large scale cultivation of Dragon fruits. Horticulture Centre equipped with state of the art scion bank was established to boost the production of quality disease free planting material of mandarin orange. Cold storage unit for flowers provided



by Horticulture Department has spurred the production and marketing prospects of Anthurium. Off-season Cabbage and Tomato introduced by the Department utilizing, Itozeki, Japanese heat tolerant variety has enabled the farmers to fetch prices higher than their normal produce. A large number of greenhouses constructed by the department have helped farmers in earning a steady income throughout the year. There are four Centres of Excellence and eight horticulture Centres in the state. With the continuous emphasis laid on horticulture, the state is steadily heading towards a revolution in the horticulture sector as more than 70% of the farmers of the state are engaged in horticulture.

**BEST FISHERIES STATE**

Bestowed with Inland, Brackish Water and Marine resources, Fisheries has emerged as a prominent economic activity for Odisha. Fifth in Inland and eighth in Marine Fish Production in India, Odisha along with various Centrally Sponsored Schemes and Plan Schemes, has initiated several activities for welfare of fishermen as well as for increasing the fish production of the State. Policy interventions such as Odisha Marine Fishing Regulation Act 1981 aims at marine fishing regulation, enforcement, adjudication, resource conservation and management etc.. Odisha Fisheries Policy, 2015 was first of its kind in India that envisaged to bring sustainable and holistic development in Fisheries Sector

through enhancement of production, productivity, optimal utilisation of available resources, export enhancement, welfare and life safety of fishermen. Odisha, pursuant to the policy interventions has observed a jump in fish production of fish from 521278 MT in 2015-16 to 758961 MT in 2018-19 with 45.6% growth over a period of three years with a subsequent increase in the seafood export value from Rs.1963.85 Crores in 2015-16 to Rs.3100.00 Crores in 2017-18. The state has thus transformed the fisheries and aquaculture of the state into a highly economic and remunerative enterprise.

**POLICY LEADERSHIP**

A policy maker par excellence, focusing on inclusive development, Dr. Ashok Dalwai, is a member of the Indian Administrative Service of the 1984 of the Odisha Cadre. The CEO of National Rainfed Area Authority, Dr. Dalwai also Chairs the Empowered Body on Doubling of Farmers Income. He has served in different capacities at both field and policy formulation stages in the States of Odisha and Karnataka. He was instrumental in developing the first Agriculture Policy of Odisha, the launch of Swachh Bengaluru, Participatory Irrigation Management, etc. He perfected

the Model Agriculture Produce and Live Stock Marketing (Promotion & Facilitation) Act, 2017; Model Contract Farming and Services Act, 2018; and Guidelines for Gramin Rural Agriculture Markets (GrAMs). Dr. Dalwai has also submitted a fourteen-volume strategy with specific recommendations for a paradigm shift in agriculture emphasizing on income security and welfare of the farmers. With a PhD in Economics and Masters in Agriculture, Dr. Dalwai has played a crucial part in envisaging policies that had imparted a profound impact on India's agricultural sector and lives of the farming community.





### LIFE TIME ACHIEVEMENTS

Agronomist, academician and leader best describes Dr. Panjab Singh currently the president of National Academy of Agricultural Sciences. Former Banaras Hindu University (BHU) Vice Chancellor and first Chancellor of Rani Lakshmi Bai Central Agricultural University, Jhansi (UP), Dr. Singh has also served as Secretary, Department of Agriculture Research and Education (DARE), Government of India; Director General of Indian Council of Agricultural Research and at the Food and Agricultural Organisation (FAO) of the United Nations in Bangkok, Thailand. With decades of experience in agriculture research, education planning and management across institutions and organizations, Dr. Singh is a trained agronomist and have always focused on the importance of quality education with social

relevance. Prof. Singh's academic and scientific excellence had him elected as Fellows of Four Scientific Societies, President of Six Scientific Academies/ Societies and the Chairman of various National and International Scientific Bodies. An alumnus of IIT, Kharagpur, Prof. Singh was also Founder Director, School of Agriculture in Indira Gandhi National Open University (IGNOU), one of the world's largest University in Open Distance Learning (ODL). His unparalleled leadership and stellar research prowess spanning over several decades have helped further the agricultural potential of the country.



### INTERNATIONAL LEADERSHIP

A Chartered accountant by profession and a politician by choice, Sh. Suresh Prabhu, former Union Commerce Minister and currently Prime Minister Modi's Sherpa for G20, has been playing a key role in positioning India globally towards advancing its economic interest. Closely coordinating with G20 nations, who together account for 90% of the World's GDP, Sh. Prabhu had significantly increased Indian exports and successfully reversed the declining trend in agro exports by signing number of trade agreements with important countries. He is also credited to have crafted India's first ever Agri Exports Policy, which was launched in December 2018. Mr. Prabhu has held several



government and semi government positions and he is a part of 16 global organizations and 9 strategic dialogues. A man of action with a penchant for undertaking reforms, scripting turnarounds and achieving superlative results by working in mission mode he is an advocate for decisive growth-driven change. Featured among the top three Indian leaders of the future by Asia Week magazine, Shri Prabhu has played a leadership role in propelling India into a new trajectory of growth and development through international collaboration.

# DOUBLING AGRI-EXPORTS BY 2022

## DIFFICULT BUT NOT IMPOSSIBLE



**Dr B K Mukhopadhyay**

A noted Management Economist and International Commentator on ongoing Business and Economic Affairs

**The target set by the Government of India is a good one – doubling agri-exports by 2022 – matching well with the target of doubling farmers' income by 2022. If it really happens everyone will be glad - the same is not impossible but calls for steps that matches well on the Indian soil. Obvious enough tinkering around the traditional path cannot lead to the result so desired! India has to walk extra miles to reach such a target.**

**C**urrent trends indicate that not only India but the developing countries also increased their share in manufacturing exports during the 1990s but saw little expansion in agricultural exports, barely maintaining their share of around 36 per cent after losing market shares during the 1980s. All of their gains in agriculture during the 1990s came from expansion of their exports to other developing countries. Share of India's agri-exports in the global trade in agri-commodities till now hovers around 1 per cent! More than 48 per cent of world agricultural trade is still accounted for by trade between industrial countries — about the same share as in 1980-81.

Needless to repeat that the global market for these products is a tremendous one and it goes without saying that if systematically tapped there lies immense scope ahead, especially for the least developing economies as the latter virtually depend on a handful of agri-commodities to earn foreign



exchange. Of course the absolute advantages as well as comparative advantages must be fully reaped. For example, India produces grapes twice a year – a rare advantage and gift of nature which other leading producers do not have.

Especially, trade in fruit and vegetable products has been among the most dynamic areas of international agricultural trade, stimulated by rising

incomes and growing consumer interest in product variety, freshness, convenience, plus year-round availability. Undoubtedly, advances in production, postharvest handling, processing and logistical technologies — coupled with increased levels of international investment — have played a facilitating role. Specifically, for developing countries, trade in these products has been attractive in



the face of highly volatile or declining long-term trends in the prices for many traditional export products. This is also a fact simultaneously that in spite of the fact that many developing country suppliers have entered the field (process is on: Venezuela, Bangladesh in mango market), relatively few have achieved significant, sustained success, which, in turn, adequately reflects the fact that the industry is intensely competitive plus rapidly changing.

### INTERNATIONAL MARKETING IS STEADILY TURNING TO BE MORE AND MORE COMPLEX

These commodity markets de facto exhibit a complex political economy – domestically and internationally. Undoubtedly, the arcane nature of many policy interventions in these commodity markets and the many heterogeneous interests exacerbate this complexity. It must be agreed upon that identifying superior policy options is not difficult, but what is pertinent on this score is the fact that the feasibility of reform depends on the power of vested interests and the ability of governments to identify tradeoffs and possible linkages that will allow them to pursue multiple goals (food security, income transfers, expansion of domestic value addition etcd ) more efficiently.

The steadily marching, forward going preferential and regional agreements often bar low-cost producers from entering the internal markets covered by agreements. Quota allocations are concentrated in a few, often high-cost countries, which are generally not the poorest. (For instance, Mauritius has 38 per cent of EU quotas. Thailand, a very low-cost producer,

is limited to a 15,000 ton quota in the United States, whereas the Philippines has a quota 10 times larger that often goes unfilled.)

### MILD HEAT IS ON

In spite of all these, this is a fact that emerging economies had injected new dynamics into global trade and the emerging economies are certainly doing a great deal by way of pushing up the global average. The region of Asia, which covers many of the emerging economies, had outperformed all other regions with an increase in terms of export volume.

But there are a number of major problems which are required to be tackled at a quicker pace so as to ensure that the future prospects are far brighter. Let us have a close look at that.

### MAJOR PROBLEMS LOOM LARGE

Though the latest trends indicate increasing demand pattern in the agriculture sector major problems loom large: lack of a broad raw material base in terms of the kinds and varieties of fruits and vegetables suitable in all respects for processing and their availability in commercial quantities at prices economical to the processing industry. Invariably, the cost of the raw material is high; low productivity and poor quality of the produce as compared to the very high levels obtained in the advanced countries affect processing and none of the processing units work to full capacity utilization. What is more, the produce taken up for processing is devoid of the quality attributes

or characteristics required for processing. Lack of a proper marketing strategy to meet the raw material requirement of processing units and ensuring a sustainable export market for the processed products has been keenly experienced.

Due to poor infrastructure in handling, transport, marketing and processing, horticulture as an industry has failed to register commendable growth in economies like India. Infrastructure stands tall to block the prospects—particularly transportation, road networks and freight and cargo facilities (the freight rates in India are reported to be higher than those prevalent in some other countries, the very fact that does very little to improve our competitiveness), cold storage facilities, etc., coupled with inadequate post-harvest management which affect the produce and products. Poor and inconsistent quality of processed products and inadequate export promotion are also hindering the growth prospects. It is the residual rather than the fresh produce that is often taken up for processing, which has a bearing on quality.

It is a fact that fruits and vegetables are generally constrained by poor price support, credit support and delivery system. Inadequate supply of power, water and research and development support exist as no less constraints. The quality of packaging also leaves much to be desired – simply not market-oriented – as importing countries demand specific packaging for each produce and the use of biodegradable materials resulting in high cost of packaging.

Then the question surfaces from another angle: trade distortions (border protection) and domestic subsidies – the major factors that have been affecting world markets. It has been the experience that large trade distortions impede trade flows, depress world prices, and discourage market entry or delay exit

by noncompetitive producers.

Climatic factors must not be lost sight of as well. The high risk for water-related yield loss in rain-fed agriculture makes farmers avert risk, which in turn, influences their perceptions on investments in other production factors such as labour, improved seed and fertilizers. Because of the risk associated with climate variability, smallholder farmers are generally and rationally keen to start by reducing risk of crop failure due to dry spells and drought before they consider making investments in soil fertility, improved crop varieties and other yield enhancing inputs. This, in turn, together with the fluctuations in yields, makes it hard for resource poor men and women in semiarid areas to respond effectively to opportunities made possible by emerging markets, trade and globalization. Rainfall micro-insurance, on this score, can increase agricultural production.

Simultaneously, this is also a fact that the dramatic commodity price increases seen in 2007 and 2008 triggered a record number of export restrictions, in particular for rice and wheat, which led, in turn, to even greater price hikes, and hindered sufficient and timely procurement of much needed food aid. Export restrictions (bans, quotas or taxes) are often imposed by governments as a means to promote domestic food security. Although they may bring some short-term relief to domestic consumers, still their overall impact on the domestic economy as well as on the rest of the world is assessed to be negative. The expected gains from export restrictions are often not realized in practice.

### LET IT HAPPEN

That is why alternative measures are required to be taken also by the governments to safeguard food security. A crucial element is supply augmentation, which requires that strengthening the agricultural sector,

especially in developing countries for which this should also remain a priority. There are a number of alternative measures, countries could implement to achieve food security without harming their producers and without triggering even higher global prices.

Farmers in developing countries could form agricultural cooperatives, which could then sell their shares to both domestic and foreign citizens and institutions. The generated funds could be used to improve irrigation and storage facilities as well as undertake agronomic research. This should help to increase both country specific and world supply and do away with export restrictions

Whatever is: the world has to craft improved trade disciplines on agricultural export restrictions since existing agricultural trade rules are primarily focused on the problems of exporters (viz. high border protection, domestic support and export subsidies) and have practically ignored the importers' main problem, which is unreliability of supplies. As the things stand now: given the uncertain fate of the Doha Development Round, it is better not to pin much hope in the short run on the agricultural negotiations. Greater supply assurances could motivate import-sensitive countries to undertake greater market access opening. The idea of a separable "exporters' code" or "food security code" – which could be pursued in case of a long-term suspension of the Doha Round – that include self-restraint on both export subsidies and export restrictions may be welcome.

So a series of practical, relevant steps, implementable in a time-bound manner, is the crying need so as to register a good growth within a shorter period of time.

The writer can be reached at [m.bibhas@gmail.com](mailto:m.bibhas@gmail.com)



**O**n July 5, 2019, Smt Nirmala Sitaraman Finance Minister presented her maiden budget in the Lok Sabha. She announced the government's vision of making Indian economy a 3 trillion dollar economy in the current year which is now the sixth largest in the world.

The proposed Budget 2019-20 made a historic allocation for the Ministry of Agriculture and Farmers' Welfare. An amount of Rs 1,30,485 crore —the highest-ever has been allocated to the sector. Agriculture, which formed 3.5% of the budget in FY19, comprised 5.4% of budgeted expenditure in FY20, an increase of 1.9 percentage points (the biggest rise). In 2014-15, the agriculture ministry was allocated Rs 31,063 crore. It received Rs 79,026 crore, according to the revised estimates of 2018-19. The allocation proposed represents a 140 per cent jump over the '18-19 budget estimate of Rs 57,600 crore. This leap is mostly due to the staggering Rs 75,000 crore allocated to the Pradhan Mantri Kisan Samman Nidhi (PM-Kisan). Of the agriculture ministry's budget, 57 per cent is now for direct cash assistance to farmers.

Another important announcement was the launch of a scheme, the Pradhan Mantri Matsya Sampada Yojana (PMMSY), intended for the Fishing and fishermen communities who are closely aligned with farming. The Scheme is envisaged to establish a robust fisheries management framework at the same time addressing critical gaps in the value chain, including infrastructure, modernization, traceability, production, productivity, post-harvest management, and quality control.

Cluster based development also received the attention of the Finance minister. 'Scheme of Fund for Upgradation and Regeneration of Traditional Industries' (SFURTI) offers to set up more Common Facility Centres

(CFCs) to facilitate cluster based development to make the traditional industries more productive, profitable and capable for generating sustained employment opportunities. The focused sectors are Bamboo, Honey and Khadi clusters. The SFURTI envisions setting up 100 new clusters during 2019-20 which should enable 50,000 artisans to join the economic value chain. Further, to improve the technology of such industries, the Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship' (ASPIRE) has been consolidated for setting up of Livelihood Business Incubators (LBIs) and Technology Business Incubators (TBIs). The Scheme contemplates to set up 80 Livelihood Business Incubators (LBIs) and 20 Technology Business Incubators (TBIs) in 2019-20 to develop 75,000 skilled entrepreneurs in agro-rural industry sectors.

Agricultural infrastructure was also given due emphasis in the budget. The budget has promised to support private entrepreneurs in driving value-addition to farmers' produce from the field and for those from allied activities, like Bamboo and timber from the hedges and for generating renewable energy. Creating infrastructure for cattle feed manufacturing, milk procurement, processing & marketing were also given equal emphasis.

Farmers' access to market has been a critical issue in agriculture. This year the Finance Minister has ensured the formation of 10,000 new Farmer Producer Organizations, to ensure economies of scale for farmers over the next five years. Besides this, the Government plans to work with State Governments to allow farmers to benefit from e-NAM. Zero Budget Farming was also stressed in the budget speech and the minister urged to replicate this innovative model reminding its potential in doubling farmers' income.

**AGRICULTURE TODAY INTERACTED WITH THE STAKEHOLDERS IN AGRICULTURE AND FOLLOWING ARE THE EXCERPTS FROM THEIR REFLECTIONS ON UNION BUDGET 2019-20**

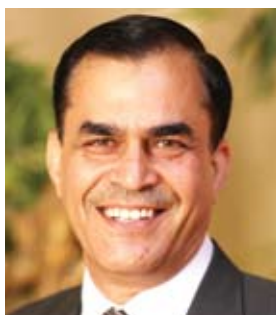
“The budget is designed to strengthen the various initiatives already started in the field of agriculture. The major aim is to make agriculture economically attractive by helping to increase the income of farmers. Another important aim is to make India a leader in agriculture in the world. For this, the budget aims to help farmers to develop their capacity to export food grains and other agriculture commodities. The budget in agriculture therefore aims to take our agriculture revolution to its next phase of global competitiveness. The budget aims to strengthen our water security system. In this connection, the following areas will require particular attention:

- Mandatory water harvesting of rain water
- Mandatory recycling of waste water
- Conservation of rain and river water
- Efficient use of sea water for coastal area water security and for creating additional jobs and income through sea water and below sea level farming
- Harnessing dew and snow

To sum-up the 2019-2020 budget will help to consolidate gain already made and make new gain particularly in the area of capturing export markets and doubling the income of farmers”



**Dr.M S Swaminathan**



**Dr. H K Bhanwala,  
Chairman, NABARD**

“The overall emphasis of the Budget is to develop infrastructure, energize investments, strengthening rural sector and empower women. The focus on Gaon, Garib and Kisan would augur well in addressing the rural distress and providing succor to the rural populace. The various schemes announced by the Hon’ble Finance Minister like Pradhan Mantri Matsya Sampada Yojana, cluster-based rural industrialisation for promoting 50,000 artisans, 75000 skilled agri entrepreneurs, overall focus on dairy sector, developing 10000 FPOs and zero budget farming are all very laudable. Majority of the farmers, who are unorganised, small and marginal, fail to get due value for their produce. NABARD has been propagating collectivisation of farmers through FPOs as it allows them to get collective bargaining power in buying agri inputs and selling their produce. The Budget proposal of setting up 10000 FPOs is a path-breaking step to ensure economies of scale for farmers. The government’s proposal to revive zero budget farming is a well-thought-out plan that would help millions of famers cut down input cost and practise sustainable agriculture. NABARD has been supporting sustainable agriculture through tribal development and watershed development programmes. This initiative will help mitigate the rural distress to a great extent.

“This is a budget covering a wide range of issues with country-wide relevance. It is in some ways a continuation of the interim budget where lot more was shared on welfare measures for farmers, health insurance and pension. More emphasis has now been laid on improving the living conditions and support for the medium and small industries, start-ups and agri-entrepreneurship. The attention to rural ease of living, rural entrepreneurs and cluster based rural industries is welcome. However, increase in petroleum product levy will increase the cost of living and would have some inflationary impact. Given that the time to prepare this budget was limited the detailing of a number of initiatives may not yet be clear.”



**Mr. Siraj Chaudhry,  
Sr. Advisor & former Chairman,  
Cargill India Pvt. Ltd.**

**Rajendra Barwale, Chairman, Mahyco Grow**

Hon. Finance Minister has articulated an inspiring vision to take the country to a \$ 5 trillion economy in next few years. Given this vision, emphasis of the budget has been largely on infrastructure.



Agriculture and rural economy are very critical part of Indian economy. While there is a good emphasis on strengthening rural infrastructure, it would be immensely beneficial to Indian economy, if certain areas of agriculture are focused for increasing the rate of growth. A large allocation of budget for rural roads through Pradhan mantri Gram Sadak yojana is a good initiative to improve rural connectivity, thereby making it easier for the farmers to reach their produce to markets. Budgetary emphasis on rural housing, rural electrification, e-Nam implementation through state governments would benefit the small and marginal farmers. Income support through PM Kisan program would also benefit the 12.6 cr families of small and marginal farmers.

While the above budgetary focus is good for strengthening the Rural economy, a greater emphasis on research and development in Agriculture along with support for modernizing our farming, would have been helpful. Our research spend on agriculture – both by public institutions and private sector is too small at 0.3% of agri GDP compared to research efforts in larger economies like USA and China, where it is at 1.2% and 0.62 % of the agri GDP respectively. As we are slated to become the largest population in the world, and with the growing economy, we need to produce more with less resources in the future. This will require more and more science-based innovations to take our agriculture to next level. We need to devote far greater amount of resources to public agricultural research, apart from incentivizing private sector to invest in this critical area. Such an approach is the need of the hour to accelerate our agricultural growth to contribute meaningfully to our goal of a \$ 5 trillion economy.

**Ajay Kakra, Leader – Food and Agriculture, PwC India**

“The SFURTI yojna is also an excellent initiative to organize farmers under bamboo and honey farmers and artisans who have been working in an unorganized sector. Also beneficial step for NE states where bamboo is a major produce. Bringing allied sector such as fisheries in focus can help the development of



fishing communities and fisheries as an occupation. ASPIRE scheme aiming to create 100 technology and livelihood incubation centers will boost the entrepreneurial spirit amongst the youth and encourage them to come out with innovative business ideas in the agro sector. This will go a long way to make the Indian agricultural industry fit for future. The creation of 10000 FPO's targets the much required need of the agriculture sector to organise the farmer community and helping them to undertake agro trade in an effective and profitable way.”

**Manoj K. Sharma, Director, MSC (MicroSave Consulting)**

The agriculture sector has been on the government's radar for the past year or more. PM Kisan and the digitization of fertilizer delivery have been welcome programs. India has become the first country in the world where 100 million farmers get fertilizer through their Aadhaar number and biometric data. It is



time to refocus on agriculture markets, as a subsidy to farmers is not a long-term solution. We have to get the electronic National Agriculture Markets (eNAM) functional. The eNAM initiative has been one of the promises that the PM has personally made to farmers—and they remember this statement. NITI Aayog and the Ministry of Agriculture will have to revisit the eNAM structure to make it useful for traders, and transparent and remunerative for farmers. Well-functioning markets will be the key factor that can address farm distress and double farmer income.

**Dr. K C Ravi, Chief Sustainability Officer, Syngenta India Limited**

“The most important announcement on the agriculture front in the 2019-20 budget is the announcement to create 75,000 skilled agri entrepreneurs. This will unleash the entrepreneurial spirit in rural India and will give agriculture sector that was believed to be dependent only on ‘Hand-Outs’ a huge boost and encourage “Hand-Up”. The emphasis on creating more Public Private partnerships in creating agri-businesses would go a long way as there are many successful models available in the private sector. The second important announcement is around creating 10,000 more Farmer Producer Organizations (FPOs). The only watch-out here would be to look more closely on the implementation as many of the FPOs created thus far have not been able to achieve the very objective of improving the collective bargaining power of the farming community. The focus on imparting more professionalism would ensure that the FPOs are successful and here again the experience of the private sector can be harnessed in the PPP mode. The vision of government to turn the farmers (Annadata) into power generators (Urjadata) will unleash a new wave of entrepreneurial spirit in rural India and strengthen the aim of the government to double farmers income by 2022.



Overall the clear articulation of the Government’s focus on gaon, garib and kisan will hopefully translate into many more initiatives where the private sector can partner. The Budget shows a rare commitment for not only providing the impetus that the farmers need through a series of progressive programs, but also creates for them an enabling ecosystem by ensuring electricity, access to cooking gas, roads, housing, and honing their entrepreneurial abilities. The First full time Lady Finance Minister rightly pointed out that Ease of Doing Business and Ease of Living should apply equally to farmers too, going beyond the conventional framework, which looked at farmers only vis a vis his/her field and not his/her entire life cycle. All these measures would hopefully give a further boost to the already existing schemes like Grameen, e-Nam etc. and take agriculture on to a consistent higher growth”.





### Satish Chander, Director General, The Fertiliser Association of India

This year's Union Budget 2019-20 is a follow up of Interim Budget presented in February 2019. In addition to existing schemes, a number of new schemes have been proposed. Government has also pronounced a number of policy initiatives and intention for growing size of Indian economy to USD 5 trillion in next 5 years. Against the Revised estimate for 2018-19 at Rs 86,602 crore for agriculture and allied activities, the Budget 2019-20 proposes to invest Rs.1,51,518 crore in this sector. This is an increase of about 75 per cent. Bulk of this additional allocation is for the flagship programme of the government, namely Pradhan Mantri Kisan Samman Nidhi (PM-Kisan) earlier announced in the Interim Budget in February, 2019. The budget spells out a few new schemes to raise farmers' income, such as, Pradhan Mantri Matsya Sampada Yojana (PMMSY), Dairying through Cooperatives, creation of 10,000 new Farmer Producer Organizations, etc. These are the steps in right direction. The budget also talks about Zero Budget Farming (ZBF). ZBF is not suitable for mass production at low cost. Organic manure can play a supplemental role along with the use of chemical fertilizers. Fertilizer

industry always recommends the use of organic manure along with chemical fertilizers. The budget also touches upon strengthening of e-NAM for marketing of agriculture produce. There is a need for more efforts to create infrastructure for storage, sorting and assaying of farm produce. With major allocation in the budget for PM-Kisan scheme, additional allocation for other agriculture schemes is marginal. About 88 per cent of the total additional allocation for agriculture is on account of PM-Kisan Scheme and remaining 12 per cent on other central government and centrally sponsored schemes implemented by state governments. It is disappointing to note that the allocation for agricultural research and education at Rs. 8079 crore is almost constant at the previous year's level. The share of agri-R & D is only 0.37% of agri-GDP. The budget allocation on irrigation is also not encouraging.

Unfortunately, the budget has been completely silent on much needed reforms in fertilizer sector. There is an immediate need to address the issue of imbalanced use of fertilizers. This is affecting soil health and crop productivity. We hope that government brings out changes in pricing and subsidy policy in months

to come to promote judicious use of plant nutrients. The budget allocation for fertilizer subsidy continues to fall short of



requirement. So far as corporate tax is concerned, the government continues phased reduction in rates. Currently, the lower rate of 25% is only applicable to companies having annual turnover up to Rs. 250 crore. This has been enlarged in the Union Budget 2019-20 to include companies having annual turnover up to Rs. 400 crore. But, this step is expected to benefit only small fertilizer companies. The Budget 2019-20 continues to extend its focus on rural sector including rural infrastructure and schemes for enhancing farmers' income. Government needs to be complimented and lauded for the same. But the efforts towards farmers' welfare are incomplete without addressing the issue of inefficient use of fertilizers. This is affecting farm productivity and farmer's income. There are large number of issues affecting the domestic fertilizer industry. These interalia include adequate provision and timely payment of fertilizer subsidy, payment of revised fixed cost of urea, reduction in customs duty on fertilizer raw materials and issues related to GST. Some of these issues are related to policies for the sector. There is a need for reforms in policies and adequate budget provisions for fertilizer subsidy to keep the domestic industry viable. We hope that these issues are addressed in time bound manner. Only healthy domestic industry can serve the cause of Indian agriculture and farmers.

(Source: Indian Journal of Fertilisers, July 2019 issue)



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**AGRICULTURE TODAY**

# AGRICULTURAL TRANSFORMATION PRE-REQUISITES STRUCTURAL REFORMS



**Ashok Dalwai,**  
Chief Executive Officer,  
National Rainfed Area  
Authority  
and  
Chairman,  
Doubling Farmers' Income  
(DFI) Committee  
Ashok.Dalwai@gmail.com

**D**oubling of farmers' income by 2022 is a monitorable target that also needs to be sustained thereafter on a continuous basis. In essence, however, it entails a paradigm shift in the practice of agriculture by placing farmer as an entrepreneur pivoting the production system.

An operational efficiency that is linear in growth and incremental in impact cannot by itself ensure doubling of farmers' income. It pre-requisites shift of both production and income curves to the next higher level by addressing the underlying constraints.

Addressing the structural weaknesses will enhance the innate or genetic potential of each of the factors of production, as also the space for these factors to express themselves wholesomely. The resolution of structural constraints will release a multiplier effect on the operational interventions at various stages of agricultural value system.

## DELINEATING SOME STRUCTURAL CONSTRAINTS

Land, labour and capital are the principal factors of production, in any economic activity. But what differentiates agriculture is its biological nature and the attendant risks, that are difficult to be controlled. In contrast, scope for demand-supply management exists in industry since it is mechanically driven.

Since climate-linked variables like rainfall, temperature, etc., are external to the management of agriculture system, and therefore not amendable, the investments made by the farmer in various factors of production stand irrevocable rendering the outcome more a matter of chance. The statistical probability of success is at best 50:50, and in reality worse off many a time.

## A NEW PARADIGM

The Committee on Doubling Farmers Income



(DFI) while recommending income approach to agriculture has emphasized that this sector be re-mandated to generate gainful employment and income, and not merely aim to support food security. This can result in functional expansion of market, as new demands for a cafeteria of agri-produce will emanate from agro-processing, energy and manufacturing sectors beyond the conventionally dominating foodgrain markets. The resolution to today's unfavourable commodity markets (domestic and global), lies in targeting a near demand-supply equilibrium in a new produce-mix environment. Agricultural diversification into high value crops (horticulture and plantation) and activities (dairy, livestock, fishery, etc) can enable this. For release of land in favour of these, higher productivity in foodgrain sector is a must. This occasions the context for efficiency in agricultural production system.

Of the various structural weaknesses, most critical is land division and fragmentation. Small and marginal farmers account for more than 86 per cent of the total land holdings. The farmers' average annual income is a composite of farm and non-farm incomes in a ratio of 60:40 (NSSO, 2012-13). The viability of farming is thus challenged, and necessitates increasing the ratio of farm income. This is directly influenced by the size of the land holding. NSSO 2012-13 also reveals that the income ratio from cultivation increased from 36.5 per cent (marginal and small) to 70.8 per cent (medium and semi-medium) to 85.5 per cent (large). Since operational efficiency is a function of the scales of economy, mobilization of farmers and joint operations vis-a-vis both input and output management without compromising land ownership offer apt solutions. The feasible instruments are farmer producer organizations (FPOs), cooperatives, contract for farming and services, legalizing land lease and the like.

An inclusive definition of farmer is another historical need, furtherance of which will target the government support to the actual cultivator. Ironically, an average of 10 per cent of cultivable land remains fallow due to restrictive land revenue laws. Share cropping and lease based on oral agreements are a norm. Not legally supported, the system suffers from tenure uncertainty and resultant poor-farm investments. A good response is



adopting a liberal and inclusive definition of 'farmer' by encompassing both landowner-cultivator and one not owning but cultivating it as a lessee or a share cropper or the like. With the technology available today, a dynamic and decentralized database at gram panchayat level can easily be maintained.

Being dependent on monsoons and markets, agriculture is vulnerable to several uncontrolled variables, discouraging the farmer from making investments in infrastructure and technology. Risk management practices by deploying forecast technologies and farmer friendly insurance schemes would help.

In response to market risks, extending the territorial market for Indian farmers is helpful. Given increasing market surplus ratios for several commodities, exports are feasible. This pre-requisites a steady trade regime and farmer-friendly export policy.

Since India's economic liberalization commenced in 1991, industry and service sectors have cornered greater attention. Agriculture is crying for reforms. Various laws that regulate the inputs (seeds, pesticides, fertilizers etc), outputs (markets, processing, retails etc) and capital investments (for gross capital formation) need comprehensive reforms to opt for ease of doing agri-business. This will among others crowd in corporate sector participation and yield infrastructure, competition and transparency.

Finally, a new challenge looming large is climate change. The expected rise in temperature, changes in rainfall pattern and higher frequency of weather extremes are forcing a basic change to the way agriculture is practised. In promoting suitable coping, mitigation and adaption measures, new technologies and farmers' financial strength are critical.

Happily, the country has come to accept that farmers' welfare rests upon higher incomes from agriculture. This warrants a shift in the production and income curves by addressing the structural constraints that impact agriculture today.

# FOOD FRONT FOR INDIA

## Sociological Approach to Sustainable Agrarian Development



**Dr. Sudhir Kochhar**  
ARS (Retd.) Ex-ICAR  
Agrobiodiversity and IPR Expert  
kochhar.sudhir@gmail.com

**A** diversified and balanced food-and-nutrition basket essentially relies upon assorted farm production and food processing. In the current, knowledge-driven-economy era, disparity in agricultural practices continues to prevail despite greater thrust on market-driven approach to systematic farm production and post-harvest processing. One reason is that many farmers at the bottom of the pyramid, who actually contribute significantly to the diversity of local fresh fruit and vegetables baskets, still suffer from low incomes and cannot afford financial investment to improve their farm practices.

However, array of conventional farming being practiced in the diversity-rich areas also contributes to wealth of resilient genetic resources as well as valuable ecosystem services capable of ensuring long term sustainable development. Therefore, it is necessary to help mitigate deprivation of the marginal and small farmers sustaining on conventional farm practices.

Three decades hence, the developing world was shaken by the dragging of agriculture into general tariffs and trade negotiations, which could potentially challenge their farm production support systems and trade competitiveness. Then there was simultaneous push to finalize the Convention on Biological Diversity (CBD) to safeguard the equitable interests of indigenous communities in the gene-rich countries, as also ensure crop biosafety by the expanding genetic engineering industry. The World Trade Organization (WTO), established in 1995, brought into practice new rules of the game for a level playing field for international trade and exclusive business in agriculture and biotechnology, including the Agreement on Agriculture and the TRIPS Agreement.

By the given time limit of 2005, India had firmed up the domestic institutional arrangements, including the legislative, policy and administrative measures, to



### WELFARE RIGHTS OF FARMERS AND DUTIES OF STAKEHOLDERS

The Sovereign Will of Union of India to safeguard farmers' welfare, particularly the marginal and small farmers and farm enterprises, is self-evident in the relational welfare measures announced for increasing their literacy and base-line engagement in general economic activities such as banking and appropriating direct minimal monetary support (Jan Dhan Yojna and PM Kisan Samman Nidhi Yojna), insurance (Fasal Bima Yojna and PM Kisan Pension Yojna), soil health (Soil Health Card Scheme), water conservation, and economization and efficient use of irrigation water (PM Krishi Sinchai Yojna and others), agro-marine food processing (PM Kisan Sampada Yojna), besides other schemes on skill development, digital literacy, rural connectivity, banking finance/credit, enterprise, innovation and business incubation, etc. It is now the duty of all stakeholders in agriculture and agro-businesses to help realize these positive rights of farmers and farm enterprises.

execute WTO-compatible agricultural trade and IPRs. Yet this was practically not enough. The farmers' socio-economic interests were not duly safeguarded, and promotion of competitive agro-business development was not fully addressed. A scenario of uncertainty and expectations thus surfaced, continued for almost another decade.

The current scenario is characterized by a significant transformational policy push by Union Government. Indian farmer is getting increasingly hopeful day by day. The new policy initiatives and schemes target the transactional empowerment of farmers to help realize the transformational potential of Indian agriculture under present state of knowledge, resources, capacity and competitiveness. Synergy among farmers' welfare measures, farm production, agribusinesses and international trade is the aspiration of all such schemes, mainly aimed at doubling the farmers' incomes by 2022. Government has also expressed seriousness in promoting farm animal and fisheries sub-sector by creating another new central ministry.

The new schemes implicitly target materialistic build-up or minimal economic uplifting of farmers as a first step towards their empowerment in the social order. A healthy, sociological ecosystem would be necessary for them to reap the benefits of these schemes. The welfare rights of farmers subsisting in the new schemes are 'Equitable Rights' provided in a true spirit of the Directive Principles of State Policy as against any statutory 'legal rights'. These equitable rights allow farmers to enjoy the benefit of the new schemes, and also bind the government functionaries with a corresponding duty to provide them all due benefits.

It may be argued that new welfare schemes do not provide any legal control to farmers for rightfully claiming, transferring or inheriting the benefits of the new schemes. This also means that the benefit of any direct transfer scheme cannot be transferred or passed on as inheritance unless pre-approved by the government on some genuine grounds.



But, nevertheless, the effect of benefits once granted by government will be more consistent. Such welfare rights could be arguably more meaningful to farmers than even the *sui generis* legal rights provided for under the PPV&FR Act, 2001.

Another significant feature of the new farmers' welfare schemes is that unlike some old schemes such as minimal support price to farmers for the disposal of their farm produce at mandis or sugarcane processing mills, etc., government has excluded all middle-men and agro-processing industries from the process of transfer of direct benefits to farmers. Nevertheless, under the spirit of 'managing the welfare rights', all such stakeholders are now duty-bound to ensure that the benefit of direct transfer schemes of government directly reaches the farmers and there is no obstruction of any sort arising due to their mutual business relations whatsoever.

An indirect benefit could be the build-up of mutual confidence among farmers and agro-industry, capable of gradually but firmly engaging them in other economic activities, such as, contract farming; effective and beneficial participation in production-to-consumption value chains; managing production and commerce in ethnic folk varieties of premium value through valid participatory contract as well as access and benefit sharing (ABS) agreements, etc.

### ASPIRATIONS, SOCIOLOGY AND PERMEABILITY

Social awareness on relevance of inter-dependence and sociological permeability to create synergies could build many new win-win scenarios. We need to strive, contributing our bit towards achieving the aspirational goals of Union of India, of removing poverty and fetching the long term agro-industrial prosperity.

# 8TH AGROCHEMICALS CONFERENCE 2019

## “Role of Agrochemicals in Sustainable Farming”



**F**ICCI jointly with the Department of Agriculture and Department of Chemicals & Petrochemicals, Govt. of India organised the 8th Agrochemicals Conference 2019 on 16th July 2019 at Hotel Taj Man Singh in New Delhi focusing on the theme ‘Role of Agrochemicals in Sustainable Farming’. Shri Gajendra Singh Shekhawat, Hon’ble minister of Jal Shakti, Government of India, Shri P. Raghavendra Rao, Secretary, Department of Chemicals & Petrochemicals, Government of India accompanied by several other top dignitaries were in attendance.

Shri R.G Agarwal, Chairman of FICCI’s sub-committee on Crop Protection Chemicals and Group Chairman, Dhanuka Agritech Ltd, while delivering the welcome address, emphasised on the control over the selling of spurious pesticides. He called on for stringent policies and regulations to curb the selling of all such illegal chemicals and pesticides that are harmful for the crops and leading to farm losses inadvertently. He called for addressing this issue collectively by the government, industry players, farmers association

and pesticide regulatory bodies. Dr. D. Kanungo, prominent scientist, former DDG, Ministry of Health and Chairman of FSSAI Committee on Residue Network, cited the importance of judicious use of agrochemicals and pesticides in minimising the colossal farm losses. Shri Jaidev Shroff, Global CEO, UPL Limited pointed out that the government should come up with ways to catalyse investments in industries like agrochemicals to accomplish Prime Minister’s vision of India becoming a \$5 trillion economy. Shri P. Raghavendra Rao, the Secretary of the Department of Chemicals & Petrochemicals, Government of India, stated that India is facing a big challenge in meeting its food requirements at present and consequently, it requires a focused attention on diverse fronts. He appreciated over India’s recent performance in the field of agrochemicals sector, but asked for more rigorous actions and efforts such as mandatory standards required for export and import of agri-products. Mr Rao further added that all stakeholders in the food and farm business from farmers to industry and government will have to brave the challenges and make strenuous

efforts to address the issues like dropping water table, degradation of land and productivity. Shri N.K Aggarwal, Chairman, Crystal Crop Protection Private Ltd highlighted the importance of the transference of innovative technologies to farmers that would minimise the extensive crop losses further. Citing the famous quote of Mahatma Gandhi ‘The soul of India lives in its villages’, Mr. Agarwal mentioned that if we want to build a new India, it is the foremost responsibility on the part of the government to reduce the major communication gaps between the system and the farmers.

### RELEASE OF KNOWLEDGE PAPER:

A FICCI- Mott MacDonald Knowledge booklet based on Indian agrochemical industry with a title- ‘Role of Agrochemicals in Sustainable Farming’ was released during the conference. This paper postulates the key challenges faced by agriculture and industry. It also offers a brief roadmap for the agrochemical industry, alludes about necessary imperatives for the government, industries and farmers to boost the development of industry and catalyse

the investment.

A Panel Discussion was held on the 'Role of Agrochemicals in Sustainable Farming' under the chairmanship of Prof. Ramesh Chand, Member of NITI Ayog. The speakers were: Mr. R.K. Malhotra, Group CEO, Modi Enterprises (Indofil Industries Ltd.); Mr. Puneet Thind, Founder and Director, Farm Grocer Products Pvt Ltd; Mr. Michael Hawkins, Counsellor (Agriculture and Food) and Senior Trade Commissioner, Canada's High Commission to India; Mr. Ravishankar Cherukuri, MD, Monsanto (Division of Bayer); Mr. C.D Mayee, Former Chairman, Agricultural Scientists Recruitment Board(ASRB) and Mr. Anil Kakkar, VP-Marketing, ExcelCrop Care Ltd. The panel concluded that Agrochemicals play a substantial role in securing the crops and thus, it becomes the major responsibility on the part of the government to bring in judicious regulatory reforms for the use of pesticides and chemicals across the industry. The panel also were unanimous for a change in public perception towards the use of chemicals and prescribed education, persuasion along with legal measures as the risk mitigation factors. Paying attention to the Food Safety instead of food production; Public-Private Partnership; judicious use of chemicals and pesticides for the sustainability of crops and other agri-produce were the other important takeaways.

A Technical session on 'Safe and Judicious use of Agrochemicals' was held under the Chairmanship of Sri Samir Kumar Biswas, Joint Secretary (Chemicals), Department of Chemicals & Petrochemicals, Government of India and the session was co-chaired by Dr.Sandhya Kulshreshtha, Consultant (Pharma), CIB & RC, Department of Agriculture, Cooperation and Farmers Welfare. Brief presentations were done by Mr. Herbert Feng, Brand Protection Director, Corteva Agriscience, Singapore on 'Global Best Practices for Managing Issues of Non-Genuine

Pesticides, the challenges faced and the strategies used to overcome those challenges'; Ms. Nora Galway, Counsellor, Australian High Commission and Mr. K.C Ravi, Chief Sustainability Officer, Syngenta India Ltd. on 'Sensitising Farmers for Safe and Judicious use of pesticides'. The session ended with an agreement on the requirement of a proper dumping ground for plonking all the leftovers/remnants; Monitoring the use of pesticides and called for a coordinated effort from all matrices, for instance, government and non-government, industry players and farmers association.

Another technical Session on 'AgTech Revolution & Cross Sector Collaborations: A win-win for all Stakeholders' was conducted under the Chairmanship of Dr. Kirit Shelat, Executive Chairman, National Council for Climate Change & Sustainable Development (NCCSD). A concise presentations were done by Dr. Nutan Kaushik, Director General, Food and Agriculture Foundation, Amity University on 'Leveraging Agricultural Technology to increase Farm Production'; Mr. Swanand Gudhate, Lead-Precision Agriculture, IdeaForge on 'Use of Drones in Enhancing Efficiency of Crop Protection Chemicals' and Dr. Harshal Kumar, DST-BRICS Young Scientist & National Renewable Energy Fellow Awardee 2016 (MNRE) on 'The paradigm shift in Agri-Management through the integration of Artificial Intelligence, Internet of Things & Big Data mining analytics (IoT+AI+BDA) architecture'. The important takeaways from the session were : Government should focus on doubling farmers income; Awareness and education of farmers on the application of advance technologies to enhance crop productivity and documentation of transference of technologies to farmers and other allied communities by the Government along with other key industry players and top agri-firms.

The last technical session was

chaired by Shri. CD Mayee, the Former Chairman, Agricultural Scientists Recruitment Board (ASRB).Mr. Sagar Kaushik, COO, UPL Limited on "Import Substitution and Giving Impetus to Make in India"; Dr. Vasant L. Patil, Director -Science & Regulatory Affairs, CropLife Asia on "Impediments in the Growth of Agrochemical Industry -Global perspective"; Shri Gopalji Trivedi, Former Vice Chancellor, Rajendra Prasad Central Agricultural University at Pusa and Mr. Harsh Dhanuka, Vice President, Dhanuka AgriTech Limited on "Role of Public-Private Partnership in Transfer of Technology" emphasised on different aspects of technologies and how it could deliver best results in the surge of crop produce and other agri-produce,could create value additions,benefit farmers in the long-run and could also assist in doubling farmers' income.The session emphasized that Public and Private sectors could play a substantial role in stabilising the major challenges faced by the farmers. The session also advocated that appropriate measures and awareness needed regarding the use of chemicals and pesticides. The members also suggested association between industries and universities need to be strengthened.

The Valedictory session was led by Sri R.G Agarwal. Mr. Agarwal stressed on the fact that government policies must be farmer-centric and a practical approach is required to cover the major issues confronted by the farmers in the field of Agriculture. He also added that initiatives must be taken to open a single window system for the farmers. He mentioned that Farmers and villages hold crucial position in the progress of any nation and thus it is very important to focus on the issues of farmers and villages in the making of a new and progressive India. "Food security, nutrition security and health security are the topmost priorities of any country, and that New India cannot be made ignoring the farmers and the agriculture sector" said Mr. Agarwal.



“We shall go back to the basics on one count: zero budget farming. We need to replicate the innovative model in which farmers are already being trained in a few states... this can help in doubling our farmers’ income in time for our 75th year of Independence”

**NIRMALA SITHARAMAN**

Finance Minister



“The adoption of coconut based multi-layer farming (coconut, pepper, nutmeg, banana, cinnamon, turmeric/ginger) is more remunerative than traditional systems”

**NARENDRA SINGH TOMAR**

Union Minister for Agriculture & Farmers Welfare.

“India needs to create agripreneurs for which skilling and tech-enabled services are crucial. Agri-based e-commerce platforms, farm monitoring, linking with fintech will help make youths become agripreneurs. While the Government is supporting the sector significantly, the public-private partnership is essential for boosting the agriculture start-up culture in India, which could be a new engine for employment,”

**ANURAG SINGH THAKUR**

Minister of State, Finance



“The budget is designed to strengthen the various initiatives already started in the field of agriculture. The major aim is to make agriculture economically attractive by helping to increase the income of farmers”

**DR. MS SWAMINATHAN**

Architect of Green Revolution