

AGRICULTURE TODAY

OCTOBER 2017, ₹45/-

The National Agriculture Magazine



10TH GLOBAL AGRICULTURE LEADERSHIP SUMMIT & AWARDS 2017



OCTOBER 2017 | VOLUME XX | ISSUE 10

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Publisher & Printer – Dr. MJ Khan on behalf of M/s Concept Agrotech Consultants Limited, Published from 306 Rohit house Tolstoy Road New Delhi-110001 and printed by Everest Press E-49/8, Okhla Industrial Area-II New Delhi-110020 Phone No. 011-23731129 Fax No.011- 23731130

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Pages in the magazine: 60

FROM AGRICULTURE TO AGRIBUSINESS

Agriculture is still a very relevant component for Indian economy. Notwithstanding the fact that the segment provides gainful employment for more than half of the Indian population, agriculture has transcended from its natural confines to a multisectoral enterprise. However, the challenges associated with agriculture has only waxed with time. Climate change, declining productivity, dissipating soil fertility, new pests and diseases, food loss among others have affected agricultural productivity. The need therefore to deliberate upon the new the challenges and unexplored opportunities is accentuated.



Doubling farmers' income by 2022 has added a new dimension to the efforts of stakeholders in agriculture to find a solution to the dampening factors in agriculture. Giving a business flavor to traditional agriculture holds tremendous opportunities to improve the income prospects of farmers. This however, requires following certain standards that would allow the agribusiness to perform standardized operations and to explore international markets. Thus Good Agricultural practices, online trading, futures market, e markets etc. have become relevant in Indian agriculture. Indian Council of Food and Agriculture who has always been in the forefront in addressing the gaps in agriculture took it upon itself as the responsibility to gather the stalwarts in the field of agriculture to a common platform of its Tenth Global Agriculture Leadership Summit where intense discussions and debates pursued. An avalanche of recommendations that evolved from the participants of the summit gave 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 Summit 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 summit in line with its tradition, honoured their efforts with the intent to encourage and support their vision.

The summit has been able to direct the leaders in the agriculture realm towards a common goal. The deliberations and the recommendations that have emerged from this fruitful and rewarding exercise will surely show the path for many future policy decisions that will in turn the set the stage for a better agriculture future for the country. 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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AGRICULTURE TODAY

Pledging Solidarity with Farmers

Agriculture ministry organizes pledge-taking ceremonies across the country

The call to Doubling farmers income has become a consistent theme of any government communications. The call has become stronger with the deadline of 2022 nearing. Beyond the Ministers' emphasis on the same through their speeches and interactions, several schemes have also been laid out to improve farmers' profit margins and hence double their income - the most recent program being the pledge-taking ceremonies across the country!!

Union Agriculture and Farmers Welfare Minister, Radha Mohan Singh had recently embarked on pledge-taking ceremonies across the country. A total of 47,08,47 farmers and agricultural workers participated in it with the agriculture ministry taking the lead in organized pledge-taking ceremonies in 562 districts of the country. A commendable figure, given the small time frame and large expanse and variance in geography and farming population. But does this joint exercise have any implication in furthering the agricultural interests of the country other than promoting political interests? Nothing tangible would arise as such from such programmes other than developing goodwill among the restive farming population.

But on a positive note, the preparedness of the ministry to organize such massive events point to yet another opportunity much less explored. Events which are organized with such fervor can be used to spread awareness among the farmers regarding the government schemes and programmes that are available in the country for agriculture. The popular Minimum Support Price system- a system of artificial pricing that attempts to ensure just remuneration to farmers- instituted as early as 1965 is much obscure among farmers. Less than 25% of farmers on an average, while for some crops, less than 5% — know about MSP. Only 19 million — or 15% — Indian farmers benefitted from crop insurance schemes announced by the government in 2014-15. As many as 37.2 million farmers were covered under the three schemes—National Agricultural Insurance Scheme, Modified National Agricultural Insurance Scheme and Weather Based Crop Insurance Scheme. Half of those who did not use insurance were unaware of crop insurance. So is the case with the many number of schemes earmarked for the agricultural segment.

While the reasons for the poor reach of agriculturally significant schemes stretch from poor extension services to illiteracy among farmers, lack of will appears to be a prominent cause. The magnificent turn outs during events of political significance, merely points out to the importance of will and motivation. Doubling farmers' income by all chance therefore needs will and conviction from the ministerial level to the grass root level.

Beyond the commitment, certain reforms too can turn around the lackadaisical situation of the farmers. While it is true that Indian agriculture is performing too well with year on year record food grain and horticultural production, the benefits do not find their way to the farmers. Farmers' need adequate support in marketing their produce. It is in this area where the farmers' suffer huge losses. As Dr. MS Swaminathan pointed out it was high time that the recommendations of the National Commission on Farmers - to provide the minimum price of the total cost of production plus 50% - implemented. It is a direct link to the farmers' income and a tangible increment can be obtained if this area is focused. Enough emphasis must be laid on value chains, improved linkage between field and fork and agricultural processing. With legalizing contract farming and land leasing, considerable area can be brought under agriculture. This has also the potential to increase farmers' income considering the incremental economies of operation ensuing merging fragmented holdings under lease or contract.

Pledging for a new India and better income prospects for Indian farmers are laudable. Beyond the tokenism, the department should focus on enhancing farm productivity by taking research from lab to land and supporting the farmers.

Retaining Ragi

Karnataka forcing farmers to cultivate ragi instead of Sugarcane and Rice

With the fourth consecutive drought looming large over Karnataka, the state government is acting tough. Ragi is being vehemently promoted as an alternative to the traditional paddy and sugarcane. Rather than promotion, a forceful conversion to ragi is what is being observed in Karnataka.

The latest efforts by the government may look authoritative, but has sprung from a desperate situation. Karnataka, reeling under recent water scarcity, cannot afford to grow the farmers' favorites –rice and sugarcane. These are water intensive crops and hence could yield poor, affecting farmers' income. So pushing drought resistant millets against water gushing crops is a smart move and would aid in long term water security of the state.

Not only the Karnataka government has been strong on their ideals, they have done enough preparation to convert thoughts into actions. With the intention to stabilise farm income and have enough fodder stock, the state has stopped the sale of paddy seeds in many districts and imposed caps on their availability in districts like Mysuru and Chamrajnagar. The states have only made 37,662 quintals of paddy seeds available by Kharif 2017 as compared to 134,315 quintals last year. The farmer can still procure paddy seeds from his peers or from private seed sellers. With Rs 150 crore invested in seed subsidies, buybacks and promotions to position ragi not just as a drought-tolerant but also a nutritional crop, the state government is hoping to permanently institute ragi in the Karnataka's agriculture landscape. The government has done enough groundwork to secure ragi's position in the state. The state had already procured 11,000 quintals of ragi, over and above the kharif season availability of 34,000 quintals. Other drought tolerant and less water requiring crops—maize, pulses and oilseeds—are also being introduced into the mix.

But the task can be a difficult one considering the already distraught farmers in the Cauvery command area. The legal issues restricting the water usage in the area has derived enough displeasure from the farmers. The cap over seed availability and other regulatory measures adopted by the government may therefore not strike the right chord with the farmers. Besides, replacing relatively remunerative crops such as sugarcane and paddy with ragi, need more incentives and even an active consideration of making it a part of state's public distribution system. Also, farmers in the Cauvery command area, the heartland of farmer agitations in Karnataka, may take this as an intrusion on their rights to sow crops of their choice. This is a precarious situation and the government may have to trudge carefully and should not create a situation to plunge the state into another farmer agitation. The concerned political parties in the state need to be taken into confidence and attempts to derive political mileage must at all times be stalled. Moreover, investments in areas of research, market and infrastructure must be laid out in millets like ragi. Increasing the leverage for ragi in the market by branding the product can enhance the market demand for this millet. Marketing the brand both inside and outside the state and cashing in on its nutritional quality can increase its market demand nationwide. Once there is demand, the farmers would naturally prefer ragi over others. Value addition, branding and good marketing techniques can transport ragi beyond the traditionally consumed regions to newer areas.

The government's strategy to diversify the crop lands is a much needed step right now. However, coercion can take a different meaning. A long term plan of increasing the area under millets can be evolved. In the meantime, better varieties and better policies, but most importantly awareness among farmers can raise the efforts reach its target far more efficiently and smoothly. Policies such as this requires ample support from the farming community and their good will.

Pulse Set to Export

Recently the Centre has removed the ban on pulses export

A decade later, India is ready for pulses export. The Centre, quite recently lifted the export ban on certain varieties of pulses – an indication that the government's plan of increasing the country's pulses output has paid off. The move comes under the compulsion from the government to clear off the buffer and give farmers better price for their produce. The Directorate General of Foreign Trade had removed the embargo on exports of toor, urad and moong dal till further orders.

The deteriorating pulses outlook of the country had forced India to ban the export of pulses in 2006. Since then, our demands have continuously outstripped our production leading to curtailing of exports and beginning of a continued reliance on imports. Imports of pulses rose from 3.7 million tonnes in 2013-14 to 4.6 million tonnes in 2014-15 and 5.8 million tonnes in 2015-16. The two consecutive bad monsoons in the previous growing seasons have resulted in subdued production and as a result, the prices of pulses had shot up. The wholesale prices of gram, the principal pulse, have risen by 65 per cent between August 2015 and August 2016 and 43 per cent between August 2014 and August 2015. The government took this as a cue and had procured pulses for the buffer stock that was created to rein in the galloping pulse prices. However, the bumper production last year led to depressed prices with pulses trading below minimum support price at a few wholesale markets. The profit margins for all pulses except gram declined by an average of 30%. This was despite the fact that there was a 12% increase in minimum support price of pulses. Moreover, at a time when global prices were lower compared to domestic prices, the government had imported over 6 million tonnes of pulses through the price stabilisation scheme leading to a swell in the buffer stock. As a result, prices of pulses collapsed. Now in order to normalize prices in the market, the government has to let go off some of the load in the country through exports.

Our policies regarding Indian pulses have been perennially flawed most often myopic, made in a response to an existing situation. Our 'food missions' have, for some time now, included merely food grains and most of the supportive schemes were targeted towards enhancing production and productivity of cereals such as rice and wheat, the effects of which are still resonated. For instance, the share of irrigated area under pulses is 16 per cent, which is in sharp contrast to that of wheat and rice, which still rule the roost at 93 and 59 per cent respectively. So the pulse production has a deep connect with monsoon and a departure from normal monsoon cycles can negatively impact the production.

Our efforts must be directed to bring in a stability on the production front by suitably introducing measures that do so in the Indian context. A recent study by Crisil pointed out that inflation in pulses, as measured by the wholesale price index, follows a cyclical pattern, with prices shooting up every 2-3 years. This to an extent can be managed by the government through alternative price smoothening mechanism with steps such as effective MSP, open trade policy, efficient irrigation facility, better infrastructure and futures market for pulses. Our efforts to boost production has borne fruit to an extent. But considering the fast declining water table and staggering monsoon volumes, attention must be trained on better water use efficiency.

The fact that Indian government is in a position to afford pulse export is exhilarating. But it should be noted that this is most likely a temporary measure and will continue to remain so until we attain stability in our production cycle.

Co 205 – A Centenarian

The famed Co 205 is celebrating its 100th Birthday

A century ago, a new sugarcane hybrid made way into Indian agriculture. Humbly named as Co 205, the variety was the first inter-specific commercial cane hybrid variety. It recorded over 50% improvement in cane yield over the native varieties and replaced them in a matter of 6-8 years. This marked the green revolution in sugarcane.

To commemorate the 100 year of release of Co 205, an International Symposium (SucroSym 2017) is being organized by ICAR-Sugarcane Breeding Institute, Tamil Nadu Agricultural University, The South Indian Sugar Mills Association-Tamil Nadu and Society for Sugarcane Research and Development. This symposium is expected to serve as a common platform to the cane researchers across the globe to deliberate on the past performance and formulate a path towards excellence in sugarcane research and development to meet the present and future challenges.

Present day sugarcane varieties are evolved from the Co varieties, an epithet that graciously marks Coimbatore selections. Co 205 developed by the Sugarcane Breeding Institute, Coimbatore in 1918 by crossing wild species *Saccharum spontaneum* and *S. officinarum* with the objectives of incorporating gene complexes for biotic and abiotic stresses and for high biomass production. This variety replaced the traditional *S. barberi* clones, bringing about three-fold increase in cane yield in the erstwhile Punjab province. The concerted efforts by breeders resulted in the release of several landmark varieties including Co 419, the first 'Wonder cane of tropical India'. The release of Co 86032 and Co 0238, popularly known as 'wonder canes of new millennium' brought in sweet revolution in the tropical and subtropical cane belts of India, respectively. At present, Co and Co-allied sugarcane varieties occupy more than 98% of the area under sugarcane in the country.

This paved the way in revolutionizing sugarcane agriculture and sugar industry not only in India, but also in most of the sugarcane growing countries of the world. This landmark achievement is unparalleled in the annals of crop breeding history. Most, if not all, of the present day varieties world-over have the Coimbatore bred canes in their genealogy. A number of varieties evolved this way has sustained the sugar industry in the country for nearly a century and made India self sufficient in sugar production.

Today India is counted among the top sugar producers of the world. Indian sugar is derived primarily from sugarcane. India has the largest area under sugarcane cultivation in the world and is the world's second largest producer of sugarcane next only to Brazil. The production of sugarcane reached 348.45 million tonnes in 2016. A similar increase in area under sugarcane was also observed. By 1935, the spread of Co varieties reached 76% improving the average sugarcane productivity from 11 tonnes per hectare to 37 tonnes per hectare. At present, the productivity of sugarcane is around 70 tonnes per hectare, which is largely attributable to the improved varieties which had its genesis from the famed Co varieties. Currently, the most popular variety in the country is Co 86032 grown from Tamil Nadu to Gujarat, the success of which can be indisputably attributed to the early Co varieties. Co varieties were popular in other countries as well. At one point of time over 30 countries were growing Co varieties and even today sugar industries in many Asian and African countries are sustained by Co varieties.

India's research overtures in sugarcane has positioned the country in a very favourable place. India being the largest consumer of sugar would undoubtedly want a steady supply source to sustain the robust population of India. The sugarcane breeding research institute has been a vital force in fostering research and development in the field of sugarcane cultivation. Their continued presence has enabled the country to secure a position of self sustenance and stability in sugar production. This reiterates the importance of research and most importantly the transfer of technology from the lab to the land.

Sonalika Tractors Emerges as 'progressive farmers choice'

India's youngest and the third largest tractor brand, International Tractors Limited (ITL), makers of Sonalika tractors, has emerged as preferred choice of progressive farmers. The company has registered 31% growth in its domestic volume by selling 4887 tractors in August as compared to 3730 tractors same period last year. In international market, Sonalika has exported 4793 tractors from April-August'17. For the month of August'17, the company has registered a volume of 1170 tractors as compared to 1008 tractors same period last year, marking a growth of 14% in the international market. Commenting on the growth, Mr. Raman Mittal, Executive Director Sonalika ITL said: "Sonalika ITL This focus is helping us in our growth as well as our farmers to increase their income. We recently collaborated with Niti Aayog to support the country's objective of doubling farmer income by 2022. Aligned to company's vision, we are promoting our products to improve farmer yield and productivity". Today, Sonalika ITL stands as 3rd largest tractor maker in India and is recognized in both domestic as well as international market as a formidable player. The company has over 7 lakhs customers in more than 80 countries. Sonalika has established World's No.1 integrated tractor manufacturing facility, strategically located in Hoshiarpur, Punjab. This plant has a capacity to manufacture approximately 3 lakhs tractors annually with a roll out time of 2 minutes per tractor. The company has strategic business partnership with Yanmar, Japan.



'Targeting 10 mn farmers in e-choupal network by 2022'

Diversified firm ITC is looking to more than double the number of farmers in its e-Choupal network to 10 million by 2022 as it gears up to expand farm produce procurement basket. The company has been working with farmers in villages since 2000 through e-Choupal -- an Internet based supply chain in rural areas which plays a key role in sourcing of various agri produce. Currently, over 4 million farmers are in the network."The government is talking about doubling farmers income by 2022, and in the same lines we plan to add 10 million farmers to the network (e-Choupal), which means we will not only see double income but also double the number of farmers," ITC Ltd Group Head Agri and IT Businesses S Sivakumar said. ITC is getting into the next generation of e-Choupal and expects that its foray into fruits, vegetables and sea food will help in widening the farmer base with which it works. Currently, the company has 6,100 e-Choupals and 24 rural hypermarkets 'ChaupalSagars' in 10 states. It sources produce like wheat, soybean, coffee, shrimp, pulses, millets, barley, and jowar along with fruits such as mango, litchi, among others. Apart from buying from the farmers, the company also provides them with mandi rates and gives them a choice to sell it anywhere.



Monsanto to sell cotton seed biz to Tierra Agrotech

US biotech major Monsanto's Indian arm Monsanto Holding has agreed to sell its branded cotton seed business to Hyderabad-based Tierra Agrotech for an undisclosed amount. Monsanto said the branded cotton seed business of Monsanto Holding Pvt Ltd (MHPL) is small and it is "fully committed" to Indian agriculture and will continue to bring innovative products. In India, the US major has three companies — listed entity Monsanto India Ltd, MHPL, and a joint-venture company Mahyco-Monsanto Biotech Ltd (MMBL). MHPL will only be divesting branded cotton seeds, which has 4 per cent market share in India's total cotton seed market. Like other seed companies, MHPL also took license to sell Bt cotton from the group company MMBL.

Rallis India demonstrates Rallis Samrudh Krishi

➤ Rallis India Limited, a TATA Enterprise and a leading player in the Indian Crop Protection industry organized a 'ShivarFeri' (Field Visit) in Kolhapur to celebrate the success of its flagship initiative Rallis Samrudh Krishi® (RSK) for sugarcane stakeholders. The "ShivarFeri" was attended by Honorable Chandrakant Patil, Member of Maharashtra Legislative Council, Minister of Revenue relief and rehabilitation with Mr. V Shankar, MD and CEO, Rallis India and Dr. Y.S.P Thorat, Director, Rallis India. The event was also attended by Seniors Officials of 15 sugar Mills from Maharashtra and around 450 Progressive sugarcane growers. The "Rallis Samrudh Krishi®" initiative for sugarcane crop in Maharashtra was inaugurated in December 2016. Under this program, Rallis India conducted an extensive research with key stakeholders to understand their concerns of staggered sugarcane crop growth and to enable increase in farm income. Based on this research, the company devised effective end-to-end agri-solutions such as Rallis Innovation Chemistry Hub (RICH) certified packages of practices (PoP) to enhance crop productivity and economics and deployed Rallis' digital services and



expert helplines. These PoPs consist of relevant and customized information on agricultural inputs and products, innovative solutions with advice on the right time for implementation, agronomic processes and methods. In FY 2016 – 17, the RSK initiative has been implemented with selected 200 farmers across 62 Territories covering 17 crops in Kharif & Rabi. Apps such as Drishti, Samadhan & Sampark have been key to its execution and success. Drishti provides predictive advisory services which include accurate pest forecast (critical pest where support

is a delight factor). Samadhan is an app that gives farmers the access to customized and dynamic PoP, weather forecast information, latest updates on crop output prices, flash news on agriculture. The app also helps them connect with Rallis India expert for immediate solutions. The Sampark app enables access to Rallis India Field Force for complete PoP besides full details on Rallis India's basket of products. It is also used as a tracking and monitoring tool for the execution of the RSK concept in various parts of the country.

Ruchi Soya sets up panel to explore restructuring options

➤ The board of edible oil maker Ruchi Soya Industries Ltd has set up a committee to explore corporate restructuring options, the company said in a statement. Ruchi Soya said it is considering internal restructuring options including creating subsidiaries for individual businesses within the firm, and separating businesses into individual entities. Ruchi Soya's primary lines of business include selling packaged edible oils and soyabean chunks, oilseed extraction, edible oil refining, and wind power generation. In FY16-17, 74% of revenue came from its edible oils business, according to its latest annual report. Ruchi Soya expects its individual business verticals will look for investors and business partnerships, the company said in the statement. The move comes at a time when Ruchi Soya's bankers are struggling to recover money from the debt-laden firm.



Centre allows import of additional 44,000 tonnes of tur dal, with riders

Following the imposition of annual import ceiling on pigeon peas (tur dal) fixed at two lakh tonne last month in response to the glut in the domestic market, the Centre has allowed an additional 40,000-44,000 tonne of the pulse to be imported. This has been done to accommodate the orders already paid for by traders prior to the restriction. The Centre is of the opinion that the additional imports, beyond the 2 lakh tonne ceiling, would not have a significant impact on prices in the domestic market. The DGFT, in its trade notification, stated that the relaxation would be given only after it is duly verified that the contracts were entered into and payments made prior to August 5 when the import restriction was imposed. The import restriction on tur dal was part of the government's decision to restrict pulses imports (which also included moong) as domestic prices had fallen below the minimum support level. Farmers demanded better prices following a bumper production this year. The total production of pulses in the country in 2016-17 was a record 22.4 million tonnes compared to 16.35 million tonnes in the previous year. The fact that the government had imported 30 lakh tonne of pulses, with much of it still lying in the godowns, made the situation worse for Indian farmers.



Draft farm law for price volatility shield

Seeking to protect farmers from price volatility by ensuring guaranteed price for their produce, the Centre will come out with a draft model law on contract farming this month. Once it is made public, stakeholders, including farmers, will be given 30 days to comment and give suggestions. A final 'model' contract farming Act is expected to be released in November after incorporating the suggestions. Contract farming is a system in which agro-processing exporting or trading units enter into a contract with farmers to purchase a specified quantity of any agricultural commodity at a preagreed price. Integration of fruits and vegetable growers with agro-processing units will help farmers not only in getting better price for their produce but also in reducing post-harvest losses. The move to bring a model contract farming Act was announced by finance minister Arun Jaitley in his budget speech. Once states adopt the model law, farmers can enter into contracts with private entities buyers who may, in turn, invest in technology and quality inputs and even provide management skills to increase productivity and reduce transaction costs. At present, farmers can suffer losses when a bumper crop causes a glut in the market or in a situation where their produce is unable to reach the 'mandis' in time for a variety of reasons.

Government charts seven-point strategy to double farmer incomes by 2022

Raising crop production, reducing cultivation costs and post-harvest losses, and reform of agriculture markets are among the focus areas of the central government to double farmer incomes by 2022, according to a blueprint released by the agriculture ministry. Adding value to farm produce via food processing, risk mitigation through crop insurance and disaster relief, and promotion of allied activities such as horticulture and animal husbandry will be the other areas of intervention, the ministry said. The release of the seven-point strategy follows Prime Minister Narendra Modi's Independence Day speech, in which he had reiterated that his government will strive to double farmers' incomes by 2022, the 75th year of India's Independence.

Centre plans to double dealers' commission on urea

Ahead of the DBT roll-out next January, the government is more than doubling the dealers' commission on urea to win their support for its implementation but would be taking on the extra burden jointly with fertiliser makers to so as not to further aggravate the farmers. Sources said fertiliser minister Ananth Kumar has approved a uniform dealer margin of Rs 400 per tonne for both private and cooperative traders instead of the current margin of Rs 180 for private traders and Rs 200 for cooperatives. The dealer margin was last raised in June 1999. The enhanced margin — amounting to an additional burden of Rs 703.3 crore per annum — would be in addition to Rs 50 per tonne incentive paid to all retailers for acknowledging the receipt and reporting the stock of fertilisers.

Govt no longer keen on floor prices for onion exports

▶ The government is no longer considering imposing a minimum export price (MEP) on onions. Imports contracted by private agencies will continue to flow in over the next two-three weeks keeping prices in check, following which the early kharif produce would arrive in the market. The inter-ministerial group (IMG) on onions, which has representatives from the Departments of Commerce, Agriculture and Consumer Affairs and Public Distribution has, therefore, shelved the option of imposing a MEP on onions to check exports for the time being. Last month, Food Minister Ram Vilas Paswan had asked the Commerce & Industry Ministry to impose a MEP on onions to check spiralling prices. The IMG had not gone ahead with the proposal and had preferred to wait and watch.

Anti-dumping duty levied on some synthetic rubber grades

▶ The government has imposed anti-dumping duty on styrene butadiene rubber of 1500 series and 1700 series, imported from European Union, South Korea and Thailand for a period of five years. The rate of anti-dumping duty is in the range of \$28.68 per tonne to \$266 per tn, depending on the country of origin, country of export and the producer and exporter. These varieties of synthetic rubber are mainly used to manufacture rubber tyres. Dumping of the products from these countries had kept domestic prices of the commodity suppressed for nearly six months and hurt profitability of rubber companies, it said. Weak demand from the automobile industry had also weighed on prices.

Govt to ensure global market for farmers: Prabhu

▶ Union Commerce Minister Suresh Prabhu informed that the Ministry will work on promoting agri exports and will ensure global market for farmers. Addressing the 10th Agriculture Leadership Summit 2017, the minister said at the multi-lateral platforms also, there is a need to work on removing trade restrictions with an aim to boost the country's agri shipments. "Farmers have all the right to access global markets and get better prices and "for that we will put in place a good policy framework very soon". We have right to have access to global markets for our farm produce by removing all trade restrictive practices," he said adding all these measures would help increase farmers' income. Prabhu, who took charge as Commerce and Industry Minister, said that his ministry will work on developing global supply chain for the agriculture sector. The Narendra Modi-led government aims to double farmers' income by 2022. Crop diversification, focus on allied sectors and food processing and tapping global markets are among the steps the government is taking to meet the target.



Govt starts direct transfer of subsidy to check diversion, smuggling of fertilizers



▶ With a view to preventing diversion of subsidized fertilizers for industrial use and their smuggling across the border, the government recently soft-launched the direct benefits transfer (DBT) scheme for the commodity in the national capital. The scheme will be scaled up to at least 10 states including Gujarat, Maharashtra and the North-East as well as to the Union territories in September. Industry leaders said they are ready for a nationwide rollout of the scheme that could help prevent the leakage of subsidies meant for farmers. However, unlike in the case of liquified petroleum gas, subsidy on fertilizers will not be passed on to farmers directly as the latter cannot be forced to shell out large sums upfront for fertilizers and get bank transfers later. Instead, companies will sell the product at state-set prices and the government will settle the subsidy involved in every individual sale to farmers with the companies within a week of the transaction.

NCDEX futures platform fetches good response in Gujarat

► Farmers' participation in futures platform of National Commodity and Derivatives Exchange Limited (NCDEX) is picking up in Gujarat as trading on it has given nearly 20% more returns to the farmers. So far, six farmer producer organisations (FPOs) have been registered on NCDEX, of which three FPOs are active on futures platform.

Companies like Reliance and IFFCO Kisan Sanchar Limited are promoting these FPOs in the state to educate the farmers for better price realisation. According to sources in NCDEX, the FPOs have traded more than 13,000 tonne in 13 commodities like maize, soybean, RM

seed, barley, wheat, cotton seed oil cake, guar seed, castor and jeera. FPOs from Gujarat have contributed around 50 tonne and have mainly traded in guar seed, castor and Jeera. The Exchange has started giving training to supportive agencies like the Small Farmers' Agribusiness Consortium (SFAC) and National Bank for Agriculture and Rural Development (NABARD). These agencies also create awareness among traditional farmer communities and become a bridge between commodity futures and the farmers. "NCDEX is equipping farmers with access to regulated markets and helping them in price discovery while partnering with every stakeholder in the commodity value chain. The Exchange has decided to create awareness by educating farmers across the country and is planning to reach over 3 lakh farmers by March 31, 2018," said Samir Shah, managing director of NCDEX.



Maharashtra government looks to revive at least 40 shuttered cooperative sugar mills

► The Maharashtra government is considering a unique model to revive defunct cooperative sugar mills in the state, possibly by acquiring them and leasing them out to those who can turn them around. Maharashtra is India's second-largest producer of sugar, which has long occupied a central place in its political economy. But over time many cooperative sugar mills have been shut, sold or auctioned off. The intent behind this exercise is seemed to see if the government could step in to prevent them from turning sick or non-performing assets in which case they could face acquisition under the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interests Act (SARFAESI Act). Maharashtra has 175 cooperative sugar factories, the highest in the country. However, only 93 are functional. Of the rest, 33 have been acquired under the Sarfaesi Act while six have been sold by the government. Three cooperative sugar factories have been bought over by private parties. Low availability of sugar cane, lack of timely credit supply by banks, cycles of low rates for sugar stock, financial mismanagement and steep decline in the sugar cane yield in drought years are some of the reasons why sugar factories have shut.

Uttar Pradesh waives Rs7,371-crore farm loans in phase-I

► Following up on its pre-election promise, the Uttar Pradesh government has initiated the process of waiver of crop loans worth Rs7,371 crore in the first phase. According to the government, loans of 1,193,224 small and marginal farmers will be waived in the first phase. However, disaggregated data shows that for 4,814 farmers, the loan amounts waived are as low as Rs1-100 per farmer, while for another 6,895 farmers, loans waived range between Rs100 and Rs500. The data also shows that for 1,127,890 farmers, the amount of loan waived is higher than Rs10,000 per farmer. In April, the newly elected state government announced a waiver of crop loans of up to Rs1,00,000 per small and marginal farmer owning less than five acres of land. Total loans to be waived is estimated at Rs36,359 crore and the scheme is expected to benefit 8.6 million farmers.



Drought-like situation in several districts of Assam

► A number of districts, mostly those in lower Assam, are facing a drought-like situation even as flood waters in some areas of the State are yet to recede completely. The State Agriculture department has sought a report from the districts regarding the prevailing situation. A senior State Agriculture officer said that drought report has been received from Baksa, while district officers in the State, particularly those in Mangaldai, Nalbari, Kamrup, Chirang, etc., which have been reportedly hit due to scanty rainfall and high temperatures, have been asked to conduct surveys and report to the government on the situation. According to the report received from Baksa, around 14673.76 hectares of cropland in 302 villages have been affected by the drought-like situation. The number of farmer families affected stands at 4,820 till August 2.

Drought warning sounded for 225 districts in 17 states

With the southwest monsoon season ending, the government's drought warning system predicts there could be a drought in 225 districts across "17 agriculturally important states of India," putting further strain on distressed agriculture sector. According to the government's National Agriculture and Drought Assessment System (NADAMS) the affected districts include large agricultural areas in the states of Maharashtra, UP and Punjab. The three states had announced farm loan waivers just months ago. These states are already struggling to pay the promised waivers and will find it harder to cope with more distress in the farm sector, experts said. Drought conditions also loom over the chronically distressprone areas of Vidharba, Marathwada, Bundelkhand and Telangana raising the prospect of another miserable year for farmers in these regions.



TN to invest Rs 1,000 cr in food-processing industry

Tamil Nadu will invest around Rs 1,000 crore in food-processing projects in the next one year. As part of this initiative, supply-chain management units will be set up in Erode, Krishnagiri, Dharmapuri, Nilgiris, Coimbatore, Dindigul, Theni, Tuticorin and Ramanathapuram at an investment of Rs 398 crore. The project is funded by Nabard and the State government.



Imported sugar to get cheaper in south India

With domestic sugar prices in the wholesale market quoted at around Rs 39 a kg, imported sugar continues to remain cost-effective in southern states even with a 25 per cent duty. In Tamil Nadu, sugar is priced Rs 1.50-2 a kg more than that in Maharashtra due to supply shortage. The southern state faces huge supply deficit this year due to three-four years of subsequent drought resulting into lower local production. Worryingly, the drought continued this year too, which prompted policy makers to allow raw sugar import of 300,000 tonnes at 25 per cent of import duty against the prevailing duty of 50 per cent. Sugar production in Tamil Nadu, according to trade sources, is estimated at 1.1 million tonnes for SS (sugar season) 2016-17 against the consumption of around 1.5 million tonnes. Again in 2017-18, the industry estimates sugar production barely at 0.6 million tonnes resulting into sharp deficit in the state next year. Meanwhile, Abinash Verma, Director General, Indian Sugar Mills Association (ISMA), said that imported sugar works out to be Rs 3-4 a kg cheaper than locally produced sweetener.

Kerala regains top slot in coconut production

Kerala has regained the top spot in coconut production, surpassing the other major producers – Tamil Nadu and Karnataka – in the 2016-17 agriculture year. With 7.70-lakh hectares (ha) of cultivated area, Kerala's coconut production touched 7464.25 million nuts, while that of Tamil Nadu was 6171.07 million nuts followed by Karnataka at 5128.89 million. Earlier, Kerala was in third position at 4896.61 million. Replanting and rejuvenation schemes and Layout of Demonstration Plots (LODP) adopted by the Coconut Development Board have started to yield good results. Moreover, the effective intervention of Farmers Producer Societies for cultivation and marketing, coupled with the scientific cultivation adopted by farmers, also helped to gain the desired results. It may be recalled that Kerala was in the top position for a long period till 2010-11; later Tamil Nadu overtook, given its advantage of high area under cultivation. As far as Kerala is concerned, it is not possible to increase area-wise production because of high labour cost and utilisation of agriculture land for other purposes.



Over 4.5 mn Maharashtra farmers entol for loan waiver, 3.9 mn of them apply online

➤ Even as opposition parties in Maharashtra continue to criticize the online procedure to identify the beneficiaries of farm loan waiver, farmers themselves have responded in large numbers to the initiative. By 30 August, more than 4.5 million farmers in the state had enrolled for the scheme and nearly 3.9 million of them had submitted their online applications for the loan waiver. The Maharashtra government, which in June this year rolled out a Rs34,022 crore farm loan waiver, has set 15 September as the deadline to submit forms, according to minister for cooperation SubhashDeshmukh. The department of cooperation is implementing the loan waiver scheme. Of the total 13.6 million farmers in the state, the Maharashtra government is targeting nearly 9 million for the benefits of the loan waiver. "Since 4.5 million farmers have enrolled, we have reached the halfway mark. There are complaints about the online system breaking down at some places and we are addressing those complaints. We expect the number of applications to increase up to 9 million or even more by 15 September," said a senior cooperation department official requesting anonymity. The government has said that the actual benefits of loan waiver in the form of direct pay-out will start getting deposited in the farmers' accounts from 1 October. The online system was started on 24 July, one month after the loan waiver was announced.

Crop Insurance Scheme Set for Revamp

➤ The government's farm insurance scheme is in for a revamp just about one year after launch, with the focus now on increasing competition among insurers, lowering the average premium and widening the scope of cover to include losses due to natural disasters.

There is tremendous potential to improve the Pradhan Mantri Fasal Bima Yojana started last year and a high-level team has asked to make it more holistic in coverage and a win-win proposition for all parties. Under the existing scheme, farmers pay 1.5% to 2% as premium for most crops compared with the average of 11% charged by insurance companies, and the remainder is equally divided and paid by the Centre and the state. The official said coverage under the insurance scheme may be widened to include damage and loss to housing and property in the event of a natural disaster.



So far, such damage was covered by the National Disaster Response Fund. The scheme now covers 30% of the gross cropped area.

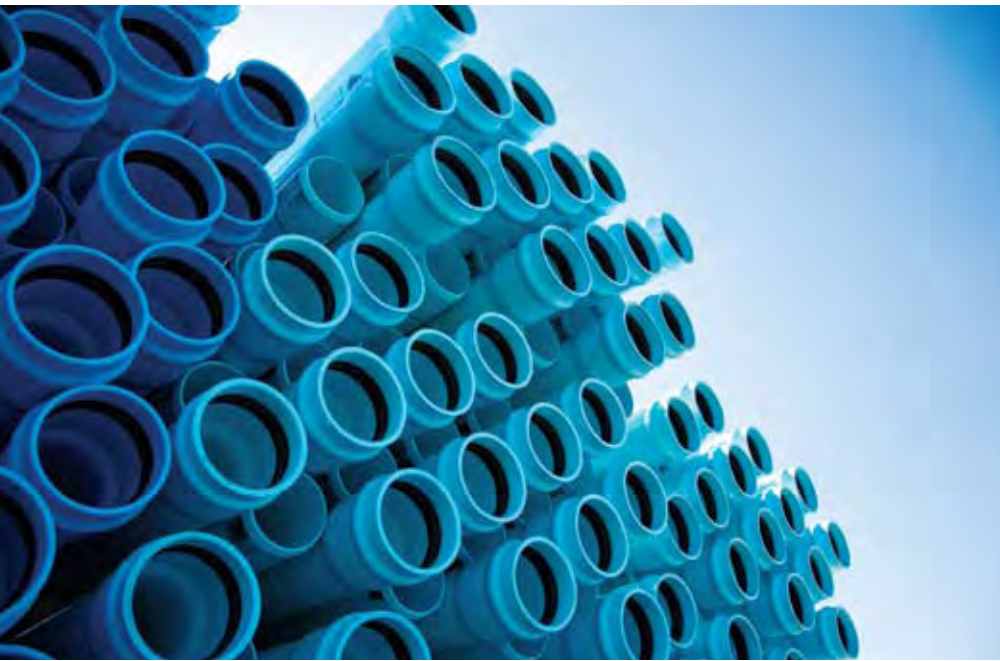
Rajasthan govt grants 5% subsidy on interest for agricultural loans

➤ The Rajasthan government has announced a 5 per cent subsidy on interest to farmers applying for long-term agricultural loans. Cooperative Minister Ajay Singh Kilak said, Farmers are in need of credit for agricultural work, but high-interest rates add to their burden and lead to obstruction in agricultural activities. The 5 per cent subsidy on interest scheme aims to help here. This scheme will be applicable till March 31, 2018," he minister said. He added, "Farmers applying for five- or nine-year loans will be eligible for the interest subsidy. In April and September every year, repayment will be reviewed. If farmers pay their installments are paid on time, the subsidy will get be credited to their bank account." Currently, a long-term agricultural loan is payable at a rate of interest of 12.10 per cent. With a relief of 5 per cent interest subsidy, farmers can repay loans at 7.10 per cent interest rate. The scheme though will be applicable on loans borrowed from cooperative land development banks for a longer period. "This interest rate is the lowest charged by any commercial bank," said Kilak.

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Chilean cherry sector launches multi-million dollar advertising campaign in China

► The Chilean fresh cherry sector, the leading exporter of cherries worldwide announced a US\$5million investment in its biggest ever advertising and promotional campaign in China to build on rapidly growing consumption in the country. The announcement follows confirmation that Chile has recently overtaken South East Asia as the single largest provider of fresh fruits to China. The ambitious campaign was launched by the Chilean Cherry Committee of the Chilean Fruit Exporters Association (ASOEX) at the 'Celebrating Cherries from Chile'

buffet lunch at Hong Kong's IKON Seaview restaurant; an event which featured the Republic of Chile's former President Eduardo Frei Ruiz-Tagle. As of 2016, Chile is now the single largest supplier of fresh fruits to China, having surpassed for the first time in China's history traditional South East Asian providers including Thailand. Already the world's biggest exporter of fresh cherries, Chile is also the largest supplier of the fruit to China, exporting some 100,000 tonnes of cherries to the world in the 2016 season. With the launch of the promotional

campaign, Christian Tagle, President of the Chilean Cherry Committee, said Chilean producers were targeting a growth in cherry exports to 120,000 tonnes by 2020, driven by greater demand in the country. According to former President Eduardo Frei Ruiz-Tagle, the campaign in China will mark a historic achievement, as this will be the largest generic promotional campaign ever undertaken by the Chile cherry in China. "This is a joint effort between the public and private sector," he added.

Coffee exports get 'instant' boost

► India's emergence as the export hub of instant coffee is pushing up overall coffee exports from the country. Coffee exports rose to 1,77,805 tonnes during April-August 2017 from 1,62,641 tonnes in the same period last year. In terms of value, the exports rose to \$447 million from \$363.1 million. The exports are believed to be driven by value-added coffee (instant coffee), which contributed nearly 25.5 per cent to total exports from April to August 2017, and this was increasing steadily year-on-year. Coffees that are being exported include green coffee and specialty green coffee and value-added coffee. Robusta coffee, imported from countries like Vietnam, is exported after adding value to it here. In 2016-17, coffee imports into the country stood at 78,042 tonnes compared to 65,618 tonnes the previous year. In terms of value, the imports jumped to Rs 927 crore (\$142 million) from Rs 802 crore (\$122 million). Re-exports stood at 79,254 tonnes compared to 67,283 tonnes. Some of the major export units which focus on value-added products are CCL Products, Tata, Narasus Coffee,

NEd Commodities, among others. Coffee production in India is expected to cross 3.3 lakh tonnes in 2017-18 as new areas have come under cultivation amid normal monsoon. If the climate and prices are favourable, production can go up to 3.7 lakh tonnes in the next two-three years, said a Coffee Board representative. The post-monsoon crop forecast for 2016-17 was placed at 316,700 tonnes, which showed a marginal reduction of 3,300 tonnes (-1.03%) over the post-blossom estimate of 2016-17 of 320,000 tonnes.



Israel has answer to India's Oriental Fruit Fly menace

► An Israeli company says it has developed a no-spray, environment-friendly solution that can protect Indian farmers from the deadly oriental fruit fly, which has destroyed 300 fruit species in India. The Oriental Fruit Fly (*Bactrocera dorsalis*) is considered to be the most destructive, invasive and widespread of all fruit flies, and is also a menace in 65 other countries in Asia, Africa and the Americas. The agri-tech company Biofeed's "lures" hung on trees, contain an organic customised mix of food and feeding stimulants, and control or therapeutic agents delivered by a patented gravity-controlled fluid release platform. Attracted by the odour, the fruit fly takes a sip and soon dies, without any chemicals reaching the fruit, air or soil. Biofeed was one of the six innovative Israeli companies invited to give a demonstration to Prime Minister Narendra Modi and his Israeli counterpart Benjamin Netanyahu during the former's July visit. The launch of the company's attractant for female oriental fruit flies is a result of 15 years of development of the core platform, and more than a year of development and testing in Israel and Karnataka.

Exports of oilmeals in Aug increase by 94%

► The country's export of oilmeals in August 2017 has been reported at 139,568 tonnes as compared to 71,879 tonnes in August 2016, an increase of 94%. The overall exports of oilmeals during April-August 2017 are provisionally pegged at 864,818 tonnes as compared to 485,220 tonnes during the same period last year, an increase of 78%, the Solvent Extractors Association of India (SEAI) has said. During April-August 2017, oilmeal imported by Vietnam from India were reported at 123,121 tonnes as compared to 132,737 tonnes; consisting of 11,698 tonnes of soybean meal, 17,379 tonnes of rapeseed meal and 94,044 tonnes of de-oiled rice bran extraction. South Korea imported 288,502 tonnes consisting 153,578 tonnes of rapeseed meal, 123,362 tonnes of castor meal and 11,412 tonnes of soybean meal. Thailand imported 47,674 tonnes consisting 24,672 tonnes of rapeseed meal, 9,454 tonnes of de-oiled rice bran extractions and 13,548 tonnes of soybean meal. European countries were the major importer of Indian soybean meal. Germany imported 60,674 tonnes of soybean meal and rest of European countries imported 95,410 tonnes. The export from Kandla was reported at 483,581 tonnes (56%), followed by Mumbai, including JNPT, handled 146,655 tonnes (17%), Mundra handled 75,540 tonnes (9%) and Kolkata handled 110,090 tonnes (13%).

Virus threatens wheat crop in US plantations

► Kansas, the top US wheat producing state, could face hefty yield losses next year from a virus that cost it nearly 6 percent of production in 2017, according to a preliminary estimate, as low wheat prices may have deterred farmers from spending money on herbicides. This year's outbreak of wheat-streak mosaic virus in Kansas was the worst since 2006, according to plant pathologists at Kansas State University. The disease also struck parts of Oklahoma, Nebraska and Colorado. Amid a global glut of crops that is depressing prices of corn and soybeans, milling-quality wheat has stood out as more vulnerable to shortages through adverse weather or disease. Earlier this year, high-protein wheat premiums surged as supplies were hit by drought in Australia and the United States. US wheat plantings for 2017 fell to the lowest in a century, amplifying the impact of crop diseases such as wheat-streak mosaic that can cause localized shortfalls, forcing grain buyers to widen their search for supplies. The Kansas Wheat Commission, a trade group, estimated losses this year from the virus at about 19 million bushels, valued at \$76.8 million. Total Kansas wheat production will be 324.3 million bushels, according to estimates by the US Department of Agriculture. The wheat-streak virus is spread by tiny mites that thrive on "volunteer wheat" – plants that sprout from any kernels left on the soil after harvest in June and July.



India, China join hands on WTO farm issue

► India and China have jointly opposed the trade-distorting agricultural subsidies given by developed countries and have called for their elimination at the World Trade Organisation. Commerce ministry said a joint proposal was submitted on July 18 countering the efforts of some WTO member countries targeting the subsidies given by developing economies to their poor farmers, while letting the developed rich nations retain their huge farm subsidies. The joint paper reveals that developed countries, including the US, the EU and Canada, have been consistently providing trade-distorting subsidies to their farmers at levels much higher than the ceiling applicable to developing countries, it said. The subsidies by the developed countries amount to about USD 160 billion. On the other hand, countries like India provide a subsistence amount of about USD 260 per farmer annually. The ministry called the proposal by India and China as important in view of the ongoing negotiations for the ministerial conference of the WTO to be held in Buenos Aires in December. The ministerial conference is the highest decision making body of the WTO, which meets after every two years. The proposal also said subsidies for many items provided by the developed world are over 50 per cent, and in some cases, over 100 per cent of the value of production of the product concerned, while developing countries are forced to contain it within 10 per cent of the value of production. In other words, it said, developed members of the WTO have access to huge amount of subsidies.

Sikkim CM honoured at an event for work in organic farming

➤ Sikkim Chief Minister Pawan Chamling was honoured for his pioneering work in the field of organic farming during a ceremony at Germany's Lagau on the occasion of the One World Festival. Chamling was conferred the Grand Prix Award during the One World Award ceremony on September 8 at a mega event attended by nearly 700 guests who had arrived from different countries, said a statement. The award was jointly handed over by Gerd Muller, the Federal Minister of Bavaria, and Joseph Wilhelm, German Organic Pioneer and Managing Director of Rapunzel. In his acceptance speech, Chamling said: "Fourteen years ago, when we began the organic campaign in our Himalayan province of Sikkim in India, little did I know that years down the line, people and communities would be driving an organic revolution, in different parts of the globe. Today, I feel immensely honoured to be in your company, and to be in solidarity with you, in striving to make the world a better place through organic agriculture." Besides Chamling, the OWA Grand Prix was conferred on representatives of the United World Colleges (UWC) from Freiburg (Germany) and Pune (India). Each of the two winners received a prize money of 15,000 Euro and an OWA statue created by Vietnamese-German artist Dao Droste. The award is presented every three years by Rapunzel and IFOAM - Organics International to people and initiatives that have an outstanding impact on the international organic movement and its ideas. This year the winners were from India, Palestine, Azerbaijan, Zimbabwe, Ethiopia and Germany.



IFFCO's digital push a boon for farmers

➤ With the Indian Farmer Fertiliser Cooperative (IFFCO) going for a major online distribution push, farmers can now place orders for agricultural biologicals over phone or at the click of a mouse. "As part of our 50th anniversary celebrations, culminating on November 3, we have launched a major digital initiative. Farmers who want to buy our biologicals, such as biostimulants, biofertilisers and biopesticides, can use this platform to get them delivered at their doorsteps," IFFCO Managing Director, US Awasthi, informed. IFFCO, which is in the process of finalising courier companies in different States, will not charge delivery charges if the order placed is up to 5 kg, he said. Called India Cooperative Digital Platform, this would also be used for procuring produce from farmers. So far, 1.78-crore farmers across the country have signed up. They can use this as an e-commerce site, said Awasthi.



India brewing expensive civet coffee

➤ India, Asia's third-largest producer and exporter of coffee, has started producing the world's most-expensive coffee. It is being made on a small scale in Karnataka's Coorg district, from the poop of civet cat. The civet coffee, also known as luwak coffee, is expensive because of the uncommon method of producing it. It is produced from the coffee beans digested by the civet cat – the feces of the cat are then collected, processed and sold. Civet coffee, a drink of the elite consumed widely in the Gulf nations and Europe, sell for Rs 20,000-25,000/kg abroad. Here in the country's largest coffee-growing State, a start-up firm, Coorg Consolidated Commodities (CCC), has made a humble beginning by making the luxury coffee on a small scale, and has also decided to open a cafe to serve the brew locally. The exotic coffee is being sold locally under the brand Ainmane; Hebbar said the company has only one outlet – at Club Mahindra Madikeri Resort – where it sells locally produced coffee, spices and other products.



New app for farm exports to European Union

➤ The Centre has launched a new mobile app for facilitating farm registration, testing and certification of grape, pomegranate and vegetables meant for export from India to the European Union. The mobile app, hortinet, developed by the Agricultural and Processed Food Products Export Development Authority (APEDA), allows farmers to apply online to facilitate their farm registration. It also helps track the status of applications and approvals by States and sampling by authorised laboratories. "This new mobile app will also assist State horticulture/ agriculture department to capture real-time details of farmers, farm location, products and details of inspections such as date of inspection and name of inspecting agency directly from the field." Hortinet is being launched in Hindi, Marathi and English to make it user-friendly, said D K Singh, Chairman, APEDA.

Agri Ministry gets new faces

▶ The Narendra Modi government inducted a technology-savvy farmer, Gajendra Singh Shekhawat, as a new junior agriculture minister and moved Krishna Raj to this important ministry, apparently aiming at strengthening the farm sector. Shekhawat and Raj will replace SS Ahluwalia and Sudharshan Bhagat, who have been moved as Ministers of State for Drinking Water and Sanitation and Tribal Affairs, respectively, in the major Cabinet rejig.



Krishna Raj was earlier the Minister of State for Women and Child Development, while Shekhawat, an RSS activist in Rajasthan, was a member of the Parliamentary Standing Committee on Finance. Parshottam Rupala, also a junior agriculture minister at present, will hold the additional charge as Minister of State for Panchayati Raj.

Chilli farmers get DNA help

▶ Scientists at the Centre for DNA Fingerprinting and Diagnostics (CDFD) achieved a breakthrough in the genomic sequencing of a species of fungus that causes disease in chilli crops. The disease results in losses amounting to hundreds of crores every year, particularly in Andhra Pradesh and Telangana. The sequencing efforts are believed to be paving the way for the design of an efficient disease control regime. *Colletotrichum truncatum* is a major fungal phytopathogen which causes anthracnose disease in chilli crops of the *Capsicum annum* species, thus resulting in major economic losses in India and in other tropical and subtropical countries. So far, not much has been known about the pathogenicity of *C. truncatum*. The results of the study conducted by N. Madhusudan Reddy and Soumya Rao from the CDFD have been published in the latest volume of the Plos One journal.

Agricultural scientists endorse commercial release of GM mustard

▶ The National Academy of Agriculture Sciences torpedoed the arguments of the anti-GM lobby on the indigenous genetically modified mustard and offered support for the commercial release of the GM oil seed, created by Delhi University scientists. The academy with more than 600 members came out with a report countering eight arguments that are mostly used by the activists while opposing the GM mustard that was approved by the Indian regulatory body for the market but held back by the government. The report was based on an analysis made by R B Singh, a former director of the Indian Agriculture Research Institute, and some of his colleagues on the arguments put-forth by GM-bashers purely from a scientific perspective.



Hyderabad varsity develops transgenic rice variety



▶ A new variety of the widely cultivated SambhaMahsuri has been developed by a consortium of Indian, Canadian and Chinese scientists. The 'transgenic variety', which has a gene from a weedy plant suitably manipulated, has demonstrated positive traits such as growing taller and bigger using water efficiently, says P B Kirti, one of the lead researchers from the University of Hyderabad (UoH). The scientists used techniques of gene manipulation on the gene AtTOR (Target of Rapamycin), which has been taken from the weedy plant *Arabidopsis thaliana*, a common flowering plant, and injected it into the SambhaMahsuri variety. The protein coded by this gene has the properties to give the transgenic variety the range of features described along with more efficient photosynthesis. The water saved can be used to irrigate other crops. Further, the gene might show robust and external appearance in other crops, which can provide economic benefits to farmers. However, the results obtained are under experimental conditions at this stage. They need to be confirmed under normal field conditions of cultivation.

10TH GLOBAL AGRICULTURE LEADERSHIP SUMMIT 2017

AGRICULTURE TO AGRIBUSINESS



COVER FEATURE

Given the prominent role of agriculture in Indian economy and changing global trade scenario, Indian Council of Food and Agriculture organized the 10th Global Agriculture Leadership Summit 2017 on the theme from "Agriculture to Agribusiness". The leadership summit aimed to bring all the key stakeholders to one platform. Prof. MS Swaminathan, Hon'ble Minister of Commerce and Industry, Sh. Suresh Prabhu, Hon'ble Minister of State Agriculture and Farmers' Welfare, Sh. Parshottam Rupala, President World Food Prize Foundation, Ambassador Kenneth Quinn, and Chairman ICFA, Dr. MJ Khan inaugurated the two days summit on 5th September 2017 at Hotel Taj Palace, New Delhi.

Prof. MS Swaminathan, Father of Green Revolution in India, underlined the role of youth to transform agriculture. Youth needs to be attracted towards agriculture as they have the zeal and enthusiasm to do work and derive the best from everything. He also pointed out that credit system could not be sustained through loan waiving, as it is not a solution to the problem for the farmers. Rather, there should be ways for using technology, knowledge and data given in





the finest and accurate form to the farmers. He talked about the malnutrition in India and how to overcome the challenge of Zero hunger. He reminded that India ranks 97 out of 118 countries in the 2016 Global Hunger Index with 39% of children under 5 being stunted and 48% of women of reproductive age being anemic. He emphasised on the need to bring together agriculture, health and nutrition through Farming System for Nutrition (FSN). He also discussed five pillars of zero hunger challenge, which needed to be taken in to consideration such as 100% access to adequate food all year round; Zero stunted children less than 2 years of age; sustainable food systems (d) 100%

increase in smallholder productivity & income and Zero loss or waste of food. Further, he mentioned the three approaches for combating Zero Hunger Challenge through bio-fortification, which include Naturally occurring bio-fortified plants like moringa, sweet potato, nutri-milletts and fruits and vegetables, as well as milk, eggs and other forms of animal protein; Bio-fortified varieties selected by breeding and selection, e.g., iron rich pearl millet and zinc rich rice and Genetically bio-fortified crops like Golden Rice and iron rich rice (after appropriate regulatory clearance. "India is one of the most diversified countries across the globe in almost every aspect, such as geography, language, customs and culture, including food. Thus, India has culinary diversity which can be used to cope with the problems from sea water farming to reform malnutrition in the country", he said. "Eliminating under-nutrition or calorie deprivation through the effective implementation of the provisions of the National Food Security Act, 2013 was also discussed by Dr. Swaminathan. "Under this Act, not only wheat and rice, but also nutri-milletts like ragi can be provided at a very low cost. Include pulses in the PDS in order to ensure that protein hunger is eliminated. The production of pulses has gone up in the country; however, farmers are facing the problem of marketing. Overcoming hidden hunger caused by the deficiency of micronutrients such as vitamin-A, iron, iodine,

zinc, vitamin-D etc in the diet can be done by integrating agriculture and nutrition through bio-fortified plants. Genetic gardens of bio-fortified plants which can provide the specific missing micronutrient in the diet can be organized in every block. KVKs should take this knowledge to the field and also help to train a cadre of 'community hunger fighters', well-versed with information on the missing micronutrients and the crops that can provide them. Effective steps should be taken to avoid food losses and to ensure food safety, particularly with reference to aflatoxins in food. This will require the safe storage of grains under low moisture conditions. The programme may also include attention to the provision of clean drinking water, sanitation, nutritional literacy and primary health care including immunization. For all of these to be sustainable, it is essential that the social engineering aspects of programme design and implementation, are given attention," suggested Dr. Swaminathan.

Hon'ble Minister of Commerce and Industry, Sh. Suresh Prabhu underlined the paradox of production and prices, as increased production in the country results in lower prices to farmers. He also expressed his concerns about the challenge of feeding increasing population as there is an increase in the disposable income of individuals, as a result there is an upsurge in the purchasing power along with the climatic changes, which is adversely affecting



the agricultural production. He also discussed about the opportunity for agriculture diversification in India. Trade practices should be relooked as they become the means of final source of income for farmers and initiatives should be taken to ensure better prices to farmers in the global market. Also, he felt that the major challenge is to ensure better returns to farmers and proposed developing Agricultural Parks in the country along the line of established industry clusters to realize the cherished dream of doubling farmers' income. Finally, he concluded by stating that agriculture should be looked through farmers' perspective and not from the industry's' perspective as then only benefits to the farmers can be ensured in the best possible way.

Ambassador Kenneth Quinn, President, World Food Prize Foundation, USA, while addressing the august house over the function, fondly recalled the great Indian effort spearheaded by doyens like Norman Borlaug, C. Subramainam and Prof. Swaminathan against hunger. He declared that the Norman Borlaug Medallion for Government of India in Honour of late Sh. C. Subramaniam, for his prominent leadership in paving way for green revolution in



India, will be bestowed upon Prime Minister Sh. Narendra Modi. Also, he urged for replicating the similar success in Africa and making it self-sufficient. However, according to him, Africa and India will face the biggest challenge in next 30 years, if poverty is not brought under control by taking corrective measures such as bringing green leadership in India and focusing on how to increase the quantity as well as quality of crops. Lastly, he underlined the role of agriculture and food security for ensuring world peace.

Shri. Parshottam Rupala, Minister of State for Agriculture and Farmers' Welfare, during the inauguration revealed that nearly 10- 15% decline in usage of fertilizers is reportedly observed after the



implementation of Soil health Card scheme in the country. He pointed out that there are two types of farmers 20% well equipped and 80% small holders. Therefore, crop planning and trade planning should be taken into consideration, specifically for small holder farmers. For this purpose, development and promotion of Agribusiness, export, import for the welfare of the farmers should be emphasized along with strengthening of contract farming in India. He mentioned that PGS, with low direct costs and the heavy emphasis placed on involvement of the farmers and local consumers is well suited to small farmers selling more locally. Furthermore, because PGS procedures are more flexible they tend to be more inclusive and appropriate for the local social context they serve. Also, he brought to notice that India suffers from the deficit of edible oil, while being one of the largest producers of oil seeds. Lastly, he emphasized on the need for up gradation of data relating to agriculture, crop insurance, risk management, water management, soil management as this can help in dealing and removing the major hindrance for the farmers. According to him, organizations and alliances like ICFA should take initiative and guide government in data relating to agriculture sector.

The 10th Agriculture Year Book 2017 by Agriculture Today was launched during the function. The Year Book contained features and articles penned by the some of the most eminent persons, representing

different facets of Indian agriculture, introducing many new concepts and initiatives and also identifying several areas of concerns to Indian farming. The year book, a good addendum to the event, strikes a right balance with combination of data, analysis and information along with the articles. The summit also witnessed the the release of Book on Eco-Agriculture Revolution by Dr. MH Mehta.

CLIMATE SMART AGRICULTURE FOR GLOBAL FOOD SECURITY

Climate Smart Agriculture (CSA) is an approach for transforming and reorienting agricultural systems to support food security under the new realities of climate change. Widespread changes in rainfall and temperature patterns threaten agricultural production and increase the vulnerability of people dependent on agriculture for their livelihoods. A brainstorming session was conducted under the aegis of leadership summit with the purpose to interact face to face and talk over the issues, challenges and opportunities relating to Climate Smart Agriculture. This significant session was chaired by **Prof. Kadambot Siddiqui**, Director, UWA Institute of Agriculture, University of Western Australia, Perth.

Prof. Kadambot Siddique welcomed all the participants and provided a snapshot on innovations in adaptation to climate change in dry land agriculture. He stressed that adaptation should be based on the process to minimize the potential



negative impacts on variable climate. He suggested that zero tillage can be adopted which will be the key to conservation, causing minimum soil disturbance and helping stubble retention. "Understanding past changes and past adaptation help in the improvement in systems understanding, quantifying impact of change along with understanding future climate change (regional downscaling, uncertainty & risk management)," he said.



Dr. Manjit Mishra, Director, Seed Science Centre, Iowa State University, USA stressed on the importance of having access to quality seed for the farmers, as it can ensure global food security with particular sensitivity to women and children. "80% of farmers in many developing countries are not using quality seed. Average yield of maize in Africa is 1.5 tonnes/hectare compared to 5 times as much in developed countries, with the difference largely attributable to inadequate use of quality seed. Almost 50% of the farmers are women, yet they earn 10% of the income and receive 5% of all technical assistance in agriculture. Therefore, there is great need to invest in science, agriculture and in the development of the seed technology and industry which will make good seed, good people and compassion," he opined. Lastly, he expressed that a hungry, thirsty, warm and crowded planet will continue to pose a critical challenge for years to come due to climate change.



Ms. Cristina Rumbaitis Del Rio, Regional Programme Manager, Action on Climate Today, discussed about the economic impact of extreme weather events in India, which incurred losses of approximately US\$9-10 billion annually, nearly 80% of it being uninsured losses. She also mentioned that productivity of major crops could decrease by as much as 10%-40% by 2100 unless farming adapts to climate change or induced changes in weather. "In addition to yield decreases, climate change related extremes may increase post-harvest losses, disrupt food access (transportation and distribution) and affect nutritional quality (Macronutrients & micronutrients), food absorption and farmer health, which can be addressed by Identifying crops with high resilience and high growth potential, Identifying crops relevant

to target population, Analyzing value chain using traditional approaches to identify blockages in the value chain and opportunities to overcome them and higher potential for scaling through the market," said Ms. Cristina. In the end, she pointed out that climate smart agriculture may look like "normal" agriculture but includes, asking the climate question, looking for options to build resilience in the farming & livelihood system and focuses attention on the most vulnerable.

The session thus concluded that despite uncertain involvement of climate impact on crop, it is clear that climate impacts on food security will be serious, and thus more research is required that directly informs the actions needed to tackle food security challenges. While food systems will need transformative options in the coming decades, challenges can be identified. In order to meet these challenges, science must work hand in hand with practitioners and policy-makers, to devise sensible options that meet current needs and capacities, try out best bets, and learn from experience.

DOUBLING FARMERS INCOME BY 2022

Doubling farmers' income by 2022, an initiative started by Sh. Narendra Modi aims to make agriculture

profitable and to improve the socio-economic status of the farmers. It was started in order to ensure that all eligible farmers are provided with hassle free and timely credit for agricultural operations. The session, 'Doubling farmers' income by 2022' aimed to discuss various shortcomings along with the possible opportunities and was chaired by **Ms. Pooja Singhal, Pr. Secretary – Agriculture, Jharkhand**.

Ms. Pooja Singhal, Pr. Secretary-Agriculture, Jharkhand, spoke of doubling farmers' income as one of the most important missions undertaken by the government. She believed that doubling farmers' income by 2022 is not an impossible mission, only if right measures and initiatives are taken by the concerned authorities along with proper execution.





Mr. Ramesh Deshpande, Convener, IAG International, Washington DC, stated that India is now the World's fourth largest economy and has witnessed a landmark revolution in agriculture transforming the nation from its chronic dependence on grain imports during fifties and sixties, to a net exporter of food, especially certain types of grains. "Despite major transformation from dependence on food aid to becoming a consistent net food exporter, India's agriculture has underperformed relative to its potential. Maintaining India's hard-won food security and achieving shared food prosperity is still a challenge. On the one hand, there exists widespread undernourishment and other hand, record production levels of food and overflowing stocks," he pointed out. He suggested Establishing Krishi Cabinets at the National & State Levels; Preparing Time-bound Action Plans for implementing policy and program reforms in support of Doubling Farm Income by 2022, Prioritizing various recommendations for actions at national to village levels, Making state governments accountable for performance, Promoting intensive Crop diversification, Expanding Farmer Access to Credit., Expanding role of RBI and the retail banking system in Agricultural Transformation, Implementing Agricultural Marketing Reforms and Infrastructure Development across states, Requiring State Governments adopt Model Laws on Land Leasing and Contract Farming, Restructuring/ Reorganizing Agricultural Research,

Education and Extension and Introducing Landscape Approach to Climate-smart Agriculture. "However, more needs to be done for agricultural growth to accelerate and help increase farmer incomes. Agriculture faces many risks and requires subsidies and disaster relief causing much burden on already stretched fiscal resources. GOI and state governments are therefore expected to do continuous monitoring of the above programs from local to national levels and correct any gaps to ensure implementation that is well funded, inclusive and efficient," he recommended.



Dr. Gopal Aggarwal, National Spokesperson, BJP, talked about the MSP (Minimum Support Price) issues, which needs to be tackled. MSP is the minimum price paid to the farmer for procuring food crops. "The increasing market orientation and reforms in the input sector have resulted in a substantial rise in input costs. There exist intervention schemes to undertake the procurement of commodities whose market prices go below the MSP, but on most occasions the marketing season of bumper crops gets over by the time a bureaucratic decision on procurement is taken. Ultimately, the farmers are left at the mercy of unscrupulous traders to sell at whatever price they offer, with resultant repercussions such as the burning of the entire crop or throwing the harvested produce on roads in protest," he pointed out. Hence, he stressed on the need to

develop single domestic market, where the farmers can sell their crops at minimum support price. It offers an assurance to farmers that their realization for the agricultural produce will not fall below the stated price. He also mentioned that lack of advancement in local market is not only leading to farmers' loss but also decrease in export of many items. He emphasized on the need creating local market to national market with the help of implementation of GST, removing state barrier and providing subsidies.

Mr. R G Agarwal, Chairman, Dhanuka Group, said that the middle men charged high prices in the market and generated large profits, which are not transferred to the farmers, who barely covered their cost of production. "Market barriers for the farmers like dealers and middlemen should be abolished. They should be in direct contact with the market and get the maximum profit for the production and output from the market. Once the farmers are connected to the market they can



get the maximum value for the hard work put in for cultivation, he said. Mr. Agarwal believed that doubling farmer's income is not a difficult task to complete and can be achieved by using high quality seed, best technology, appropriate knowledge about crops & weather, help of concerned institutes and government. He also pointed out that government is putting rigorous efforts to achieve the mission of doubling farmers' income by 2022 by enhancing the Minimum Support

Price (MSP) to provide price support to farmers for not only helping to survive but to live a good and happy life.

TECHNOLOGIES FOR YIELD AND QUALITY MANAGEMENT

Agriculture in India is the core sector for food security, nutritional security, sustainable development and poverty alleviation. Milestones in agriculture development in India include Green revolution, Evergreen revolution, Blue revolution, White revolution, yellow revolution, Bio technology revolution and the most recent one being Information and communication technology revolution. With advances in technology, farmers can more efficiently produce more with less manpower, aiming increased yields while using fewer inputs and getting the best quality products. In order to discuss the various opportunities and challenges, a session on “Technologies for Yield and Quality Management” was conducted and chaired by **Dr. Bakshi Ram, Director, Sugarcane Breeding Institute.**

Dr. Bakshi Ram, Director, Sugarcane Breeding Institute, fondly recalled the establishment of Sugarcane



Breeding Institution in 1912 in Coimbatore, Tamil Nadu. He brought to the notice that the CO205 was first release of the institute during 1918 and in 2018 it will complete 100 years. The variety released from the institute are used in various states like Uttarakhand, Punjab, UP, Bihar etc. and increase in yield and sugar recovery have been observed. All the farmers who have adopted these varieties have doubled their yields and the success rate for the crops have increased tremendously.

Dr. Soumitra Das, Director, India Zinc, underlined that production is not a challenge and the real challenge in our country is to keep that produce safe for consumption. He also highlighted the importance of zinc for the crops. “About 40% of Indian soils are deficient in zinc

and gradually is becoming a global issue. Zinc is an essential nutrient for human health, and every human needs zinc to survive. Ensuring adequate levels of zinc intake is a key component in efforts to reduce child illness, enhance physical growth and decrease mortality in developing countries. 8 lakh people die annually due to zinc deficiency (WHO), of which 4.5 lakh are children under the age of five,” informed Dr. Das. He further said that Zinc deficiency in crops



and humans is a global challenge, which can be resolved by using zinc fertilizers. “The increased use of zinc fertilizers in balanced fertilizer with the support of micronutrients fertilizer policy by government can help in ensuring soil health, food security and nutritional security as



it is essential for maintaining DNA," he opined.

Dr. Anoop Karla, Executive Director, Ayurvet Limited, focused on issues like food scarcity, declining soil fertility, water scarcity and global warming. "Waste to wealth i.e., Vermicompost should be adopted by biogas plants which will give fuel for cooking, electricity generation, and



rich bio fertilizers," he suggested. Also, he pointed out that health of farmers is to be kept good in order to keep our selves healthy. "Quality products should be produced working with knowledge, science and technology. The mixture of these three is an accurate blend to get the best result from agriculture," recommended Dr. Kalra

Mr. Kaushal Jaiswal, Managing Director, Rivulis India Limited, stated that usable fresh water accounts for approximately 0.56% of the total water on the planet. However, the irrigation efficiency by flood is 40%-60%, furrow 50%-70%, sprinkler 70%-85%, centre Pivot 80%-90% and drip 90%-95%. He also mentioned that Rivulis has Introduced 'Manna Irrigation', which will focus on "When to irrigate and how much to irrigate". "Manna Irrigation is a leading provider of irrigation intelligence software solutions: proprietary satellite models and sensor-free cloud-based software, that provide growers with a high- resolution, integrated view of the entire field. Advancements in agriculture technology is an important



contributor to a more sustainable agriculture system that promotes continuous improvement and less resource use. The advantages are that it is reliable based on deep agronomic knowledge with irrigation specialty, simple – no equipment, accessible and easy to use, affordable – no CAPEX, low-cost subscription and it is global. Satellite is used as the main source of data because it is almost free data as data is becoming more accessible, has high resolution, suitable for intra-field variability detection, has high frequency i.e., revisit every five days and soon every day and multi-spectral data that allows for advanced agronomy modeling" he informed. According to him, technological advancements in food and agriculture are making it possible to improve the health and wellbeing of millions of people worldwide. It is necessary to enable the world to produce more food with fewer resources and less land.



Mr. Ravinder Singh, CEO, Agri Innovative Limited, brought to the notice that enhancing pace of agricultural development through

efficient use of innovations and human resource will make the future of agriculture brighter in the coming years.

Thus, it was concluded that technology for yielding crops and maintaining the quality of crops will give a boost to agriculture sector in the coming years. Science and technology along with improved human capital will be powerful enough to drive the positive change in the performance and evolution of farmers.

POLICY INITIATIVE AND ROLE OF STATES IN AGRICULTURE

State policies regulate the production, transportation, processing, and marketing of commodities. Many state-funded universities and community colleges provide agricultural education, research and extension services important to the health of the industry. Thus, state plays an important role in the policy initiatives introduced by the government. The session focusing on the challenges faced by the state governments while formulating a policy initiative was chaired by **Mr. Sanjay Prasad, Pr. Secretary – Agriculture, Gujarat**.

Mr. Sanjay Prasad, Pr. Secretary – Agriculture Gujarat, pointed out that focus should not only be on production of crops but majorly on the income of the farmers. He pointed out that over the time, many schemes have come up for loans, price support to farmers and to provide incentive to the farmers and these were helping in the field of horticulture, agro industry policy,



mixed farming and agro-forestry. Also, he brought to the notice that technology has played very vital role in the development of agricultural sector such as, Direct Benefit Transfer (DBT) in fertilizers, solar energy through solar panels, collection of data through satellite which helps in doubling the already doubled income of the farmers. "All the components if combined together will definitely give boost in agriculture," Mr. Prasad expressed.



Sh. Mani Shankar Aiyar, former Union Minister, pointed out that there is a desperate need for new technology as old technology is not competent in present time to give high productivity from limited resources. He quoted that Haryana government has taken an initiative to introduce educational institution to spread awareness and give knowledge, especially agriculture. Different schemes have come up like gram sabhas, habitation sabhas and special sabhas for women and children. He also brought to the notice that schemes have also been formulated even at the university level. For instance, students of Punjab University went to the villages of Punjab and reached out to the farmers, creating awareness among them about various subjects, such as technical know-how, irrigation methods etc.

Mr. Om Prakash Dhankad, Agriculture Minister, Haryana, mentioned about various initiatives taken by the Haryana government in order to help farmers in the state. He pointed



out that Haryana government is promoting A2 milk (cow milk) while trying to connect farmers with different markets at local and national level. "The government is focusing on making of the brand (Haryana Fresh Brand) in the villages, which is not only safe and healthy but will give additional fund to farmers. This is because branded products are the most purchased and trusted commodities in the market. Individuals get attracted towards brands and tend to buy products with brand names. This step will increase micro economy of the farmers," he said. He quoted that agriculture output or the income will increase when input is to its best. Balance of output and input needs to be taken into consideration otherwise farmers may incur losses

as their livelihood depends on the produce. Moreover, workshops, seminars etc., should be regularly undertaken so as to teach them the art of selling products as they know their products much better than any other person along with its actual cost and value. This will help them to generate maximum benefit or profits for their hard work.

Thus, it was concluded that states play a crucial role in supporting and developing solutions for agriculture. State governments are required to initiate policies and take real steps in implementing the same.

PARTNERING FOR AFRICAN AGRICULTURE DEVELOPMENT

The agricultural sectors in India and Africa share common characteristics from diversity of climatic regions to similarities in farming systems. Given these similar sectorial characteristics and complementary developmental priorities, there is significant scope for the agricultural sector in Africa to benefit from the Indian experience and on the other hand Africa offers one of the most attractive and large untapped markets for Indian farmers. In order to identify the possibilities, this session was conducted and was chaired by **Dr. Jeremy Tinga**



Ouedraogo, Head, African Biosafety Network of Expertise, NEPAD, Dakar. Dr. Jeremy Tinga Ouedraogo, Head, Agriculture Biosafety Network of Expertise, NEPAD, Dakar stated that given the two important instruments



1) African Union Agenda 2063 and 2) Malabo Declaration, Africa is very clear on what they want. He mentioned that Africa is very clear and decisive on the urgency and concreteness to address sustainably the issue of malnutrition and hunger. He revealed that the goal to zero hunger by 2023 is not emotional but a decision with determination and commitment viewing the trends of hunger and malnutrition in Africa. He underlined that Africa is making efforts to boost agricultural growth and ensure food safety for its inhabitants.

H.E Mr. W.H. El-Sreihin, SG,

African Asian Rural Development Organization, stated that agriculture remains the backbone for India – Africa partnership for food production. With the changing global landscape for agriculture and food, India and Africa have emerged as key partners in contributing to global food security. He also mentioned that there is a requirement of globalizing market with agriculture products, fertilizers, pesticides etc. “There is real need to invest in agriculture by public sector, focusing on pre and post harvest activities of farming and value addition in farmers’



income which may also facilitate the partnership with various countries,” opined His Excellency. He also emphasized on capacity building through seminars, sessions, strategies and policy forming with the financial assistance from the government and other institutional

bodies. Moreover, countries have started emphasizing on agricultural sector which is uniting the countries and making the sector flourish successfully.

Prof. Karim Maredia, Director, Africa Partnership Program, Michigan State University, brought to the notice that in the last decade more than US\$100 million were invested in Africa for



improvements of food security crops such as maize, cassava, banana, cowpea, sorghum, sweet potato, rice, potato, etc. through modern biotechnology. He also mentioned the key areas which needs to be addressed, as insects and disease resistance, drought tolerance, nutritional enhancement, nitrogen use efficiency and salt tolerance.

Dr. H Rahman, South Asian Director, International Livestock Research Institution pointed out



that 70% of the world's rural poor relies on livestock for livelihoods. About 600 million poor livestock keepers are there in the world, of which around two-thirds are rural women who contribute about 40% to the Agricultural GDP. In the poorest countries, livestock manure comprises over 70% of soil fertility while 90% of animal products are produced and consumed in the same country or region and over 70% of livestock products are sold 'informally'. By ensuring decent livelihood for livestock keepers, Enhancing productivity to narrow yield gaps within specific farm systems, Adjusting to pressure on ecosystems, natural and genetic resources, tackling environmental externalities, Adapting the climate change and extreme weather events, and reducing Green House Gases (GHG), Improving food and nutritional security and Identifying policies and actions to contribute to sustainable agricultural development, considerable improvements can be made in their lives. He suggested few strategies which can be adopted in accordance to achieve the above mentioned goals include networking, policy and institutional arrangement, targeting, capacity strengthening and larger presence in South Asian countries. Working with farmers and partners may provide knowledge and help in the development of relevant mitigation options and strengthening productivity and resilience of food systems.

Dr. Ruth Mbabazi, Research Associate



Professor, MSU, mentioned that Africa is facing the global emerging challenges of climate change, rising food insecurity, political volatility, population explosion, mounting environmental pressures, leading to an urgent need to produce more food & fiber and provide clean water. He pointed out some of the corrective measures, which needs to be taken into consideration such as Policy reforms and creation of enabling environment for investment and participation by private sector, Capital investment by private sector, Establishment of various value chains, Formulation of policies which allow upstream investments, Adoption of improved technologies, Increased investment into enabling infrastructure – ICT and Appropriate policies and regulation to foster agribusiness. He also mentioned about the need for the public private partnership to provide the right business environment to attract capital investment, and ensure that investments support national targets, such as upgrading research infrastructure; improving professional and technical competencies; and promoting entrepreneurship and innovation.

Therefore, India's commitment to engage with Africa is a reinforcement of the political and economic cooperation. Both the economies are determined to work together and achieve the common goals of food security, improved health and nutritional conditions, capacity building and skill development, technology transfer, and other parameters that have an impact on

the economic condition of people. The similar consumer markets in India and Africa provide great opportunities to work together and meet various global challenges.

INTERNATIONAL COOPERATION FOR AGRICULTURE GROWTH

Agriculture has brought many countries together who have joined hands for the expansion of global agriculture by resolving issues and achieving missions. A session on "International Cooperation for Agriculture Growth" was conducted for exploring such possibilities and identifying hindrances for the same with **H.E. Mr. Petko Doykov, Ambassador of the Republic of Bulgaria** as the chair.



H.E. Mr. Petko Doykov, Ambassador of Republic of Bulgaria, stressed that the role of international cooperation could be best seen in figures for example in case of Bulgaria. Trade of agriculture goods constitute around 15% of the total commercial exchanges on an annual basis. As a member state of European Union, Bulgaria's commercial exchanges are mainly with European Countries and accounts for nearly 80% of exchange. Though gradually trade with India is pacing up and it is expected that in 2018 goods in large quantity will be exchanged between the two nations. He expected that working hand in hand with India will boost the exchange of goods and services to a great extent.

Mr. Rene Van Berkel, UNIDO



Indian Representative, introduced UNIDO as a specialized agency of the United Nations that supports industrialization in its member developing country states as a contribution to the realization of 2030 Sustainable Development Goals (SDGs). "Achieving the global goals creates at least US\$12 trillion in opportunities by 2030, just in four major economic systems, i.e., Food & agriculture, cities, energy & material and health & well-being, of which food and agriculture alone accounts for US\$ 2.3 trillion. In Asia, these four systems create at least US\$5 trillion in opportunities and pursuing those opportunities could create almost 230 million new jobs in the region by 2030, equivalent to 12% of the Asian labor force. The main role of UNIDO is to build resilient infrastructure, promote inclusive

and sustainable industrialization and foster innovation," said Mr. Rene.

Dr. Mustapha El Hamzaoui, Director, Food Security Officer, USAID, mentioned that ever since 1980s goal was to fasten agriculture productivity because of which agriculture has been increasingly integrating with global market spreading its roots rapidly. Rewarding relation in the field of development and to address program to overcome agriculture productivity has proved to be a great step in terms of agriculture. He was of the view that training program for triangular partnership may bring countries together. "In fact, in India, 1000 students received education under IAP project, regarding agriculture innovation partnership with upgraded curriculum which changed their mind set towards agriculture," he pointed out. He



also pointed out that international cooperation plays a vital role in tackling global issues.



Dr. Chakib Jenane, Lead agro Economist, World Bank, pointed out that one of the major key challenges faced by India is the low productivity in the agriculture sector due to cumulative degradation of resource base (water and soils), reliance on low value cereals, low farm efficiency and unfavorable climate change. He also talked about the possibility of doubling farmers' income. He referred to the Crucial World Bank study findings and quoted economic efficiency of typical farm, which was estimated to be 33% and is very low as about half of the income is forgone due to technical inefficiency (technical advisory services) and other half due to crop



choice or production structure – incentive driven by current policies. Thus, there is a plenty of scope to double or even triple typical farmer's income. Hence, there is a need for forging a resource-efficient growth path, which may include: De-linking subsidy from: (i) input use and (ii) production of water thirsty crops; Shifting expenditures to public investments in R&D, irrigation systems, rural infrastructure (roads), cold storage facilities and markets; Considering direct income support, which requires a delivery architecture and experimentation to design and build coalitions of support; Building resilience through R&D for innovations in climate-smart-agriculture and Complementary agenda to grow the rural non-economy, so that agriculture does not remain the reservoir of last resort occupations. He was also of the belief that there is a need to accelerate the transformation process – increase the Agribusiness-to-Agriculture ratio i.e. income multiplier effect. Further, he discussed about the resilient inclusive growth and suggested a few areas - Agriculture Diversification towards High-Value Agricultural Commodities (HVAs), Agribusiness and value chain development, Agro-industry and logistics, Irrigation technologies for water use efficiency, Climate smart practices, Drought tolerant varieties, Soil health management, Support for rural non-farm economic opportunities, Skills Development for better quality jobs, Supporting the production of quality and safe food, Making agriculture more nutrition-sensitive and Developing a functional food quality, nutritional, traceability and safety assurance infrastructure.

Dr. Mio Oka, Director (ENRA DIV) Asian Development Bank, recalled that in 1960s the Asian Development Bank was known as Agriculture Development Bank but over the time bank expanded its



scope and provided services to not only agricultural areas but to other sectors as well, thus is named Asian Development Bank as of now. Also, one of the top clients for the bank is India. In fact, a project in Maharashtra is one of the successes by the bank in India. However, there are certain questions which still need to be answered, such as the role of public sector, new technologies which India need and possibility of fishery market in India.



Mr. G. James Gonzalez, Agriculture Counselor, Chile, deliberated upon the trade of food commodities between India and Chile. He pointed out that in 2017 few commodities alongwith walnuts had been imported to India, which are phosphine approved, instead of methyl Bromide. Moreover, Chile got market access for sea food, while new import conditions for blueberries and avocados were imposed. He also brought to the notice that walnuts, coco/coirpith, Jatropha seeds are being exported to Chile from India. Moreover, the countries have come in the agreement regarding mangoes, while lentils and mung beans first shipment is being currently processed. Both the countries are

looking forward for more trade as both have reduced tariff on various food items and have also expanded the Preferential Trade Agreement (PTA). Relationship between India and Chile in terms of agriculture has given a platform for both the countries to unite and do business on large scale. Countries are getting market to sell their commodities and citizens are getting benefit of enjoying products of other countries. It is a platform to build relation of business, peace and security.

Thus, international cooperation is very crucial since strong international business relations will result in better growth of economy as well as this sector. The mandate of international cooperation should be to foster mutually beneficial partnerships with other countries of the world in a multilateral as well as bilateral format.

In the concluding session of the day, **Prof. Ramesh Chand, Member of NITI Aayog,** stressed that working with changing climatic conditions and rapid utilization of resources have wounded internationally and nationally. **Prof. Kaptan Singh Solanki, Governor of Haryana,** expressed his pleasure on being part of this event for the third time in a row and recommended that India needs to take measures for the growth and development of farmers else economy may be paralyzed. **Dr. M J Khan, Chairman, ICFA,** greeted all the delegates and acknowledged Mr. Suresh Prabhu, Minister of Commerce & Industry of India for inaugurating 10th Global Agriculture Leadership Summit and Awards, 2017.

CONTRACT FARMING AND AGRO PROCESSING

Contract farming involves agricultural production being carried out on the basis of an agreement between the buyer and farm producers. However, only big agro processing industries are involved in contract farming. There is a need for

adoption of contract farming by small and medium agro processing enterprises as it will help in better price realization and reduction of post-harvest losses. Thus, contract farming and agro processing sector offer a wide range of opportunities. In this context, a session was organized on 6th September and was chaired by **Mr. SK Makhija, Advisor, Jain Irrigation System Limited.**



Mr. SK Makhija, Advisor, Jain Irrigation System Limited, stated that contract farming and agri processing is the road to doubling farmers' income. He mentioned that Jain Irrigation System followed the policy of FARM TO FORK—SUPPLY DRIVEN, however with time the new paradigm is FORK TO FARM—DEMAND DRIVEN. He also pointed out that contract farming is essentially demand driven; its effective supply chain makes it sustainable. He also explained the integrated model of Jain Irrigation System and pointed out that crop specific challenges are identified at Jain Irrigation System, however, solutions are innovated. He elaborated on the road map to double farmer's income, which may include: Farmer's empowerment with science, technology and capital, Increased productivity and Target increased prosperity and all inclusive growth.

Ms. Alina Gumpert, Director, German Agribusiness Alliance, focused on ways to increase crop production, such as efficient technology, soil preparation and modern irrigation system and pointed out that India



has taken initiative of alliance with German companies to be competent in the above mentioned techniques. She stressed on the importance of strengthening along with financial aspects for efficient resource utilization, policy and finance. Moreover, large quantity and high quality directly results in increased benefits for farmers. She opined that core of farming is business, thus, farmers should be regarded as businessmen. Close connection with stakeholders and sharing farming approaches will help farmers improvise. "Signing of MOU between ICFA and German Agribusiness Alliance is an initiative, which will catalyze development of agricultural sector at both the ends. She pointed out, though, German technology is regarded as expensive, it provides large diversity of technology accompanied with the services with potential of accelerating development.



Dr. PK Joshi, South Asia Director, IFPRI, brought to the notice that India was the largest country in contract farming at the time of green revolution which was so unnoticed

till now. "Small farm holders are attracted towards contract farming due to assured prices & procurement, higher profit, access to better technology and lower transaction costs. Moreover, farmers receive higher prices which have marked up to 5-20% higher in vegetables (SAFAL case study in India), 25% higher in broiler (Venkateshwara Hatcheries case study) and 4% higher in milk (Nestle case study in India) and risk which is as high as 88% is shared by the firms," he informed. Dr. Joshi also pointed out that contract farming also faces certain challenges, especially along the supply side, such as, low marketable surplus & heterogeneous product, breach of contract by producer or the firm, low bargaining power of smallholders because of low volume, asset specialization that restricts change in production portfolio and dependency on the firm in the long-run to access market, information and technology. He also mentioned some of the agribusiness opportunities which India can utilize considering the low levels of processing. A Food processing fund – US\$300 million with NABARD, Mega food parks - 42 approved with US\$2.38 billion and 134 cold chains (87 completed), Start up and MUDRA Bank. He felt that there is a need for aggregating farmers for scale and homogeneity through Farmer Producer Organizations, Cooperative, Self-help groups or Cluster farming; forming commodity boards; federating FPOs with commodity boards and incentives to farmers' organizations.

Mr. Manoj Rawat, Head – Agribusiness, RBL Bank, suggested that there is a need to build synergy which will reduce multiplicity of frameworks, synergy between various markets – Physical, Spot, online & exchanges which help in rightful price discovery for farmer, buyers/traders & processors. Also, he mentioned about the



new electronic platform, National Agriculture Market e-NAM and discussed its characteristics, which make it a Unified market for agricultural commodities across country. "This model will make the marketing channel shorter, resulting in helping with better price recovery for seller & buyer by minimizing transportation, eliminating the intermediaries, reducing post-harvest losses and market inefficiencies. Moreover, it may provide some monetary benefits to the farmers, such as higher share in consumer rupee, minimal marketing cost and lower transaction cost, while non-monetary benefits to the farmers include reduced direct contact in farmers and consumers resulting in better understanding of consumer demand as well as their behavior. For the convenience of the farmers' e-NAM App is also introduced which is easy to operate," said Mr. Rawat.

He suggested that way forward for connecting farmers and integrating agriculture value chain needs to be participative for the development of trust and credible framework.

Thus, it was concluded that companies and States should promote group contracts with the intermediation of local NGOs and other organizations and institutions so that contractual relationships are more durable and fair. Moreover, insurance component is a must to protect contract farmers' interests. There is thus the need for collective action through cooperative process to be able to buy and sell at better prices.

ECO- AGRICULTURE AND GAP CERTIFICATION FOR SAFER FOOD

In a healthy farm system, agriculture works in harmony with the natural environment. Chemical fertilizers and pesticides not only contaminate surface water, they also affect fish population and human health as well. To regain the lost ecological status, it is high time to practice ecological agriculture without further delay. Further, the agricultural products should be GAP Certified, so that products meet the international quality standards for trade. The session on Eco- Agriculture and GAP Certification was conducted so as to assess the opportunities and identify



the challenges in adoption of both, eco agriculture and GAP Certification. The session was chaired by **Dr. M H Mehta, Chairman, Science Ashram.**

Dr. M H Mehta, Chairman, Science Ashram, opined that a hunger-free and nutrition-secured world is possible by manufacturing and using eco-friendly products and technologies. This can be used to improve farm productivity sustainably, reduce input costs, and increase farmer's wealth. He stressed on the use of agro – waste bio-composts as green waste for different productive purposes such as Pest control –Microbial, plant extracts and combinations; Growth Regulators – Natural, organic and Bio fertilizers, Bio control Agents, Bio compost -Nutrient Management & Disease Control. He felt that there is a need to prepare the road map for eco agriculture revolution, suggest



an action plan and monitor the same. "Eco agriculture revolution is coming and India can and should take lead to showcase its potential and capabilities as lacking behind in agriculture will be a big loss for India considering the fact that more than half of the country's population is dependent on agriculture for livelihood," warned Dr. Mehta.



Mr. Anil Jauhri, CEO, National Board of Accreditation of Certification Bodies, briefed the house about GAP certification. He advocated customizing farmer Global GAP as per requirement. He revealed that if GAP certification becomes bench mark with global GAP, then there will be 40% less payment. Therefore, to increase the export market of India, the commodities should be certified. Presently, all the international trade is regulated by GAP, while India is still not competent and losing market.



Dr. Maharaja Muthoo, Chairman Roman Forum, Rome, stated that the Global GAP is a feather to the cap in the field of agriculture and pointed out the ban of Indian mangoes in Europe as it lacks certification. He underlined that there is a need to move fast forward in to

modernization to give small farmers of rural areas a boost to grow in their work, so that they become the owner of their products. He again pointed that basmati rice also lacks certification even after being rich in quality, the products could not be traded and this is making farmers poorer day by day even after getting the best result from the crops.



Dr. AK Singh, CEO, GICIA India Private Limited, talked about forestry and stated that in India, FSI has defined TOF as all trees growing outside recorded forest areas irrespective of size of patch. "Besides constituting a major source for production of industrial wood in India, tree plantation benefits are multidimensional like trees in Riparian Zones: regulate sediment/chemicals/pollutants transport, nutrient sinks whereas its other benefits are social, psychological, health, aesthetic, ecological and economic functions. The benefits are innumerable from providing food to biodiversity and micro climate regulator to stress reliever," Dr. Singh revealed.



Dr. AK Shrivastava, Director-Projects, Centre for Agriculture and Rural Development, suggested that

transformation of agriculture to agribusiness, adoption of risk resilient methods can be economically viable, and demand based agriculture needs to be promoted like intelligent farm planning, base-line values, efficient farming systems aligned to Agro-eco systems, natural resources & complementing applied resources, skilled farming community and commodity trading reforms. He concluded by mentioning the need for Farm schools and exclusive universities of farm learning, Demand, Need and Resource based Intelligent Farm planning, IT- making available and integrating them with intelligent applications and Collating Research and Technology Results and Experience.

Thus, the aim of eco-agriculture is to manage the resources of rural communities to improve their welfare, preserve biodiversity and ecosystem services, and develop more productive and sustainable farming systems. Eco-agriculture, now emerging as a holistic approach to ecologically and socially responsible land use, represents a vision of rural communities managing their landscape and resources to jointly achieve three goals: Enhance rural livelihoods; Conserve or enhance biodiversity and eco-system services and Develop more sustainable and productive agricultural system.

ICT IN AGRICULTURE

Information and communication technology (ICT) offers a wide range of solutions to various agricultural challenges focusing on the enhancement of agricultural and rural development through improved information and communication processes. E-agriculture continues to evolve in scope as new ICT applications continue to be harnessed in the agriculture sector. This session chaired by **Dr. M Moni, Chairman, ICFA Working Group on ICT** was conducted so as to assess the opportunities and challenges prevailing in this sector.



Dr. M Moni, Chairman, ICFA Working Group on ICT, highlighted that during 2016 and 2017, ICFA had conducted a series of round table conferences in the area of farm crisis and farmers distress, some of the suggestions which were brought out during the conference had become the part of track report and will help in achieving the objective of doubling income for farmers by 2022. He focused on strengthening value chain, use of space technology, penetration of contingency plans for the same. He remarked that it was of great benefit for the farmers and great success for ICFA that their hard work and deeds are giving results.

Dr. Venkat Marju, CEO, Source Trace Inc., Boston, stated that it is of paramount importance to improve the

situation of the farmers. He believed that using the latest technology can help farmers use best quality seeds, know the best suited time for growing crops, fertilizers, pesticides, climatical changes, market demand and current prices of the crops. He felt that farmers should get the deserved share in the profits from the produce sold. The mediators in



the market who earn the maximum profits do not pass on the same to farmers. Therefore, steps have to be taken to aggregate farmers. Further, he also talked about the depletion of resources such as water which is a major concern. With the depleting resources every drop of water and every bit of other resources has to be used as a precious gem for the world.



Mr. Ruchit Garg, CEO, Harvesting Inc. California, brought to the notice the 'Data embrace technology' and regretted that data used is still based on the old technology. "Data plays important role and can solve many problems, while on the other hand incorrect data can bring downfall in any sector. Therefore, recommendation is to keep accurate data as it forms the base of agriculture," Mr. Garg pointed out. He also suggested that the companies should use remote sensing technique for collecting accurate data and that data collected from latest technology will not only solve many problems but also bring the best on the land with the best result.

Ms. Divya Akhilesh, Head,



MyAgriGuru, said that farmers are the base of agriculture and today there are two realities in the farmer's life, first, limited access to everything in the value chain and secondly, he is becoming increasingly digital with more than 50% of rural households having access to internet enabled smartphones. She introduced the app known as AGRI-BUZZ (Charcha) - a place where the farmers discuss their problems and share their experience.

Thus, the benefits of ICTs for increased agricultural productivity and strengthening the agricultural sector include timely and updated information on agriculture related issues.

CONNECTING FARMERS WITH TRADE AND MARKETS

Connecting farmers to market is an integral part of the urban/farm linkage and have continued to rise in popularity, mostly due to the growing consumer interest in obtaining fresh products directly from the farm. To evaluate the need and opportunities for connecting farmers to market, a session was conducted which was chaired by **Mr. Rajesh Sinha**, Managing Director, NEML.

Mr. Rajesh Sinha, MD, NEMI,



reminded that teaching farmers how to reach market is not the task but reaching right market to get the actual cost of their crops is important. He mentioned of MCDX, which is held by large governmental bodies and operate in the pure market form for connecting farmers to trade and market in different ways.



Mr. Vijay Sardana, Head-Agribusiness, UPL Limited, pointed out that due weightage to trade and market is not given, instead it is considered as the last step of the business. He brought to the notice that India is looked as market but not as an exporting hub of the products, thus, focus should be in transferring knowledge about customer and market to farmers. Further, different crops should have different policy as all crops are different from each other and vary from each other in almost all aspects. He stated that traditional market has depleted with time but the combination of products, services and customerization can help to increase the farmer welfare as negligible investments have been made for supporting exports and fulfilling citizens' hunger.

Mr. Raju Kapoor, Director, Dow Agro



Science Ltd., briefed the purpose of the New Agriculture Division of Dow DuPont, viz "To enrich the life of those who produce and who consume, ensuring progress for generations to come". He also mentioned that the division focuses on prosperity and sustainability of agriculture through rise in the productivity and profitability.

Mr. Pradipta Sahoo, Head- F & V, Mother Dairy, revealed that the happiness index of Mother Dairy is the maximum. Also, he pointed out that Mother Dairy is not solely dependent on animal husbandry but



also produce fruits and vegetables to add value to the farmers. He expressed the concern over the current lowest GDP of India, of all times.

Connecting farmers with trade and market will help the farmers to become the owner of their crops and Agripreneurs. Market will give the farmers exposure of knowledge and new technology which will help the farmers in agriculture.

INNOVATIVE FARMERS EXPERIENCES

One third of Indian farmers are rapid adopters of technology, another third of them are slow-going, and the rest are not likely to use modern technology at all. Farmers should adapt to the innovation and the government should accept the innovative ideas from the farmers' experience to make policies. In accordance, this session was conducted so as to consider the



action plan for learning from farmers' experiences and adoption of the innovative methods introduced by them. The session was chaired by **Dr. Rajaram Tripathi, Convener, All India Farmers Alliance.**

Dr. Rajaram Tripathi, Convener, All India Farmers Alliance, stated that all farmers union should merge and collaborate to work hand-in-hand with the government and other institutions for achieving the farmers' welfare. He quoted "Coming together is a beginning, keeping together is a progress and working together is success". If all the farmers come together on one platform, then they will be better heard and their problems will be given due preference and importance.

Mr. Rajpal Singh Gandhi, Director, Green Valley farms Pvt. Limited, stressed on the importance of actions and opined that action and



implementation is more important than framing policy. He further talked about the crop called Stevia and briefed the house about its various health benefits. He pointed out if farmers adopt this crop, then there will be 100% export of the



products as there is high demand for the products made from Stevia. It is a crop which has to be considered once and it will give the best result to the people and country.



Mr. Arun Bahakoo, General Secretary, Kisan Manch, opined that farmers should unite and diversify and suggest ways to attain maximum possible benefits. All the institutions, policy makers and farmers should work together because the ability to work together towards a common vision and the ability to direct individual accomplishment towards organizational objectives is the fuel to attain uncommon results. He also mentioned that bed plantation should be adopted for the crops as it had led to good results in past. Moreover, fencing by fruit trees can not only solve the problem of fencing but also give additional value to the farmers as they can sell the fruits in the market. There are ample amount of measures which can be taken for

the benefit of the farmers but only a step forward is required.

Thus, innovation is an important pillar of agriculture extension and can come from anywhere. Therefore, we must keep ourselves open for accepting and gaining maximum out of them.

For the concluding session of the day, **Ambassador Kenneth Quinn, President, World Food Prize Foundation,** quoted Prof. MS Swaminathan's book and urged to take learning from it. **Dr. RB Singh, Chancellor, Central Agriculture University, Imphal,** stated that Skill market and digital market may help to build poverty free India. **Mr. Anand Bhakar Ropolu, Hon'ble Member of Parliament,** congratulated ICFA and expressed that the consistency of ICFA in sustaining its agenda is itself an achievement. **Dr. M J Khan, Chairman, ICFA,** recapitulated all the launches and discussions which took place during the two day event and thanked all the delegates for making the event a success.

Finally, the formal vote of thanks was presented by **Mr. Alok Sinha, Director General, ICFA,** who expressed his gratitude to all delegates who attended the event and a special vote of thanks to willing sponsors and staff of Hotel Taj Palace for meetings all the ends and needs and making this event a grand success.

10TH GLOBAL AGRICULTURE LEADERSHIP AWARDS 2017



Policy Leadership Award

Mr. K. Chandrasekhar Rao, Chief Minister of Telangana State

The first Chief Minister of Telangana, Mr. K. Chandrasekhar Rao, took many pathbreaking initiatives that created far-reaching impact on the rural sector of the state and touched the lives of millions of farmers. Popularly known as KCR, Mr. Rao has been allocating the highest-ever funds of over Rs.25,000 Crore every year in the Budget to redesign and construct projects to irrigate one crore acres. The Budget for irrigation was less than Rs.10,000 Crore for all of undivided AP earlier. He also has announced a scheme to extend financial assistance of Rs.8,000 per acre per year to the farmers from 2018. Under his leadership, the government has taken a decision to create crop colonies in the state to ensure farmers grow suitable crops in their fields depending on local climate conditions. As part of the efforts to revive the farm sector in the State and also to revamp the rural economy, traditional activities such as, sheep-rearing, fisheries, dairy, among other activities are being actively promoted. Mr. Rao took the initiative in waiving outstanding agricultural loan of Rs.17,000 crore benefitting more than 35 lakh farmers in the State. His visionary leadership and bold policy measures of hugely investing into infrastructure projects are paving the path of reviving the agriculture sector and economically empowering farmers of the State.



Research Leadership Award

Professor Kadambot Siddique, Director, UWA Institute of Agriculture, University of Western Australia, Perth



Professor Kadambot Siddique, with more than three decades of pioneering work in agricultural research, research training and management in Australia and globally, has made outstanding contributions to agriculture science. His research on the adaptation, physiology, genetics and agronomy of crops has boosted cereal and grain legume production in dry-land environments. His major contribution to dry-land agriculture has been the release of 13 new grain legume cultivars. His education and research training initiatives span many regions, including Australia, Asia, Africa and the Middle East. Professor Siddique has made outstanding contributions to several areas of crop science as demonstrated by authoring 350 papers in international peer-reviewed journals, 46 books and book chapters and 78 conference proceedings. He has conducted research on adaptation of crops to water deficits and the phenological, morphological, physiological, biochemical and genetic traits that enable crops to cope with various abiotic stresses. Professor Siddique's research leads have made new inroads into developing dry-land agriculture thereby increasing its production and increased gains to farmers.

Academic Leadership Award

Dr. Manjit Mishra, Director Seed Science Centre, IOWA State University, USA



Dr. Manjit Misra, a renowned academician and currently the Director of the Seed Science Center at Iowa State University, USA, the largest public seed laboratory in the world, has been providing leadership to the faculty, staff and graduate students through innovative academic courses. The Center administers the USDA National Seed Health System which is instrumental in the export of \$1.2B of seed from USA each year. Misra's true passion lies in mentoring future leaders of the seed industry for which he conceived and developed an innovative "Global Curriculum on Seed Science and Business Management" that combines science with business acumen. The curriculum which is delivered online via distance technology has enrolled 104 graduate students from 21 states in USA and 11 other countries. He also developed a new graduate course on Seed Technology and Business titled "Seed Conditioning Management" and taught the course via distance education technology. Dr. Misra has relentlessly worked towards developing human capital for seeding a food-secure future.

Farming Leadership Award

Dr. Gazalla Amin, Chairperson, Fasiyam Agro Farms, Srinagar

Fasiyam Agro Farms, the pioneer in commercial production of lavender essential oil and aromatic flowers in the private sector, is Kashmir's gift to India and the world. With a state of the art distillation facility in Kashmir, the farm was also among the first to have a successful private-public partnership with the Indian Institute of Integrative Medicine that helped the Farm in value addition and efficient farming practices of medicinal plants. Fasiyam Agro Farms, through its tremendous success in lavender gave an alternative option to small farmers and entrepreneurs of the Valley to pursue the same. With its strict avoidance of harmful chemicals and disposing the waste from the distillation unit in an environment friendly way, the residues are converted into compost that is used back to nourish the farm. The farm has generated interest among individuals and institutions, and study trips from educational institutions have become a regular affair, which is helping the spread of better farming methods and scope for agro-entrepreneurship. Fasiyam Agro Farm's foray into the less travelled route of flowers and essential oil has opened up new avenues for increasing farmer incomes.



Agribusiness Leadership Award

IB Group and received by Mr. Bahadur Ali, Managing Director of IB Group

A growing conglomerate headquartered at Rajnandgaon of Chhattisgarh, Indian Broiler Group has diversified itself into a well-integrated business unit within a relatively short span of 25 years. Commencing its journey with mere 100 birds in early 1985, the group today has evolved into an industry giant that has business interests in poultry, dairy, oil, animal feed and specialized pet food. The Poultry business, which forms the heart of IB Group, has adopted backward and forward integration successfully. The hatcheries under IB Group maintain high levels of hygiene and bio security arrangements. The Group has also joined hands with local farmers in setting up of partnership farms, thereby providing extended employability, promoting entrepreneurship and better income prospects. Produced under the brand name of ABIS, today IB Group caters to approximately 60% of the population in Central India in table top eggs and chicken category. With a vision to contribute to the gigantic task of providing nutrition and protein security to the under-nourished population, the Group has created an integrated agribusiness model with dynamic forward and backward integration process, state-of-art technology and futuristic thinking.



CSR Leadership Award

DCM Shriram Limited which was received by Mr. RL Tamak, Executive Director



DSCL Sugar, the sugar business of DCM Shriram, in continuation with its CSR policy to contribute towards social development, took the lead in implementing 'Sustainable Sugarcane Production Program' – a multi-pronged approach leading to productivity enhancement, large-scale conservation of water resources and soil health enhancement in sugarcane cultivation in Uttar Pradesh. The Program based on the principles of Suitability, Sustainability and scalability, aims to catalyze a behavior change among farmers. As a result of this program, 160,000 farmers were trained in Good Agricultural and Water Management Practices. As a result of this project, an Increase in yield by 20% has been recorded across the sugarcane catchment areas. Increase by 37% in adoption of press-mud compost for soil health improvements and reduction of fertilizer application, double-digit growth in area under trash mulch has been achieved under this project. Over 55 billion liters of water-use reduced from Oct 2013 till Dec 2016. DSCL Program has thus been able to manage the ecosystem, community, and business risks emerging from future soil health and water challenges in sugarcane cultivation.

Corporate Leadership Award

Mahindra Agri-Solutions Limited which was received by Mr. Ashok Sharma, Managing Director of the company



Mahindra Agri-Solutions, a part of the USD 17.8 billion Mahindra Group, encapsulates the vision of 'FarmTech Prosperity' through its efforts as a catalyst for sustainable and inclusive growth of farmers. The company has partnered with a million farmers to improve their produce quality and productivity by providing latest advances in farm technologies and agricultural know how. With its wide portfolio of inputs viz. seeds, crop care, micro irrigation products and backed by high quality advisory inputs and services through Samriddhi outlets, MASL has successfully helped farmers increase their productivity over the years. Through its strong outputs business consisting of Fruits and Vegetables, Pulses, Edible Oils and Dairy, the company supports farmers with assured market and better price. Having grown more than 11 fold in the last 5 years, Mahindra Agribusiness has become one of India's largest grape exporters, launched its premium fresh fruit and dairy brand - Saboro, and established 'Farm to Fork' presence across the Agrivalue chain. Through continuous innovations and credible partnership, MASL has been successfully steering farmers towards higher productivity and profitability.

Entrepreneur Leadership Award

Mr. Suresh Agarwal, Chairman Beej Sheetal Seeds P. Ltd, Jalna

Shri Suresh Onkardas Agrawal, Chairman of Beej Sheetal Research Pvt. Ltd., Jalna, is a prominent figure in Indian seed business. An experience spanning half a century, Agrawal stepped into the shoes of an entrepreneur as early as 1968 with his company "Safal Seeds Pvt. Ltd.". The entrepreneur in him sensed the demand for temperate and tropical vegetable crop research in India and established a joint venture company with a renowned Dutch vegetable seed company "BejoZaden B.V." of Netherlands. "Bejo Sheetal Seeds Pvt. Ltd." company was the first of Seeds Company to have joint venture with foreign collaboration. With his critical analytical and entrepreneurial skills, more than 800 new hybrid varieties of vegetables have been developed by the company. His business acumen led to a number of MoUs with Universities, Institutes and public sector organizations in India and abroad for sharing knowledge and technology. Shri Agrawal has displayed excellent leadership in developing the seed sector of the country and hence became a prominent player in Indian seed industry.



Trade Leadership Award

KRBL Limited which was received by Mr. Anil Mittal, Chairman

Beginning its century old journey from Lyallpur as a modest commodity trading house, KRBL today has reached the pinnacle in global basmati rice business. Its flagship brand - India Gate is the most recognized product and today is synonymous with basmati rice. During the Economic Liberalization introduced in the year 1991, KRBL Ltd was quick to identify and bring new rice milling technology such as sorting and grading systems to India. Highly inclined towards technology infusion from the earlier times, the leadership of KRBL Ltd was easily established through "quality consistency and reliability". The acquisition of World's largest rice mill in Punjab by KRBL Ltd, helped the company move up the value chain and consolidate its global dominance. The launch of contract farming, dissemination of new seed varieties and farm extension programs created strong backward linkages for the company and in the process helped KRBL to develop a strong long term relationship with farmers. Today, the company has become a leader in the basmati rice industry with a constant striving to bring new ideas, innovations and technologies to create comparative and competitive advantages.



Livelihood Leadership Award

African Asian Rural Development Organization (AARDO) which was received by Mr. W.H El-Sreihin, Secretary General



African-Asian Rural Development Organization (AARDO), an autonomous inter-governmental organization, was set up with a view to promote coordinated efforts, exchange of experiences and cooperative action for furthering the objectives of development of the rural areas. One of the earliest examples of South-South Cooperation in rural development in the Afro-Asian region, AARDO promotes collaborations with various international organizations for the economic and social welfare of the rural community. The organization has been effectively collaborating with the appropriate international and regional organizations, including UN agencies, the national bodies, governmental or non-governmental, both in the developed and developing countries, for purposes of taking action to accelerate agricultures and rural development in the member countries. With the Mission to catalyze efforts of the Afro-Asian countries, to help them empower their rural societies and to reconstruct the economy of their rural people, AARDO has been playing leadership role in helping its member countries with knowledge sharing, successful experiences, models and effective programs, thus helping them launch cooperative action.

Development Leadership Award

Dr. Bakshi Ram, Director, Sugarcane Breeding Institution, Coimbatore



Dr. Bakshi Ram, with the unique distinction of having served as the Directors of both the oldest Sugarcane Research, Shahjehanpur and the newest the ICAR-Sugarcane Breeding Institute, Coimbatore, devoted his academic career to sugarcane research and development. Under his visionary leadership, several varieties of sugarcane were developed that have significantly changed the sugarcane production and productivity of India. His untiring efforts have resulted in the development and release of six early maturing varieties, namely CO- 98014, CO- 0118, CO- 0237, CO- 0238, CO- 0239 and CO- 05009) and four mid late maturing varieties. During 2016-17 these varieties occupied 10.02 lakh hectares in Punjab, Haryana, UP and Uttarakhand which is 42.03% of total sugarcane area in these states. CO 0238 developed by Dr. Ram is the biggest block-buster that transformed the sugarcane landscape in Northern India. For the first time in the history of sugar industry, more than 12 percent sugar recovery was recorded during 2015 - 16 by sugar mills in UP. Dr. Ram's leadership role in evolving varieties that not only raised the production potential of sugarcane farms but also helped in increasing farm incomes by an estimated 20%, and thus generating an extra gain of over Rs. 10,000 crore to farmers.

Business Leadership Award

Dr. P V Mohan Rao, Chaiman, Pasuram Group, Haryana

Under the leadership of Dr. PV Mohan Rao, Pasura Group, has been serving the Indian farmers for over two decades, with innovative products that are derived from years of research in the state of the art facilities of the Group. Dr. Rao's vision of providing cost effective solutions to the farmers through plant protection, nutrients and growth enhancers have helped millions of farmers improve their incomes and also of the Group which was rewarded by incredible returns of over US\$225 million during 2016-17. Pasura Group has built state of the art research and development facilities and has qualified scientists working on the mission to evolve customer-driven agricultural solutions, which has led to the introduction of a number of new molecules, generic molecules, new formulation, pre-mixtures etc. The flagship company of the Group, Pasura Crop Care Pvt. Ltd., has other group companies with distinct products and services portfolio such as Dhana Crop Sciences Ltd., Coromandel Agri Sciences Pvt. Ltd., Taaza international Ltd. among others. Clearly a league ahead of its competitors, Pasura Group under the dynamic leadership of Dr. Rao has been serving the farming community by innovativeness, integrity and loyalty.



Extension Leadership Award

Dr. S K Patil, Vice Chancellor, IGKVV, Raipur

A renowned educationalist, Dr. S.K. Patil with over 30 years of experience of academic and administrative excellence in agricultural research, extension and education, is a person with progressive thinking and modern ideas. As Vice-Chancellor of Indira Gandhi Krishi VishwaVidyalaya, he steered the University towards academic excellence, encouraged multi-disciplinary programs and transformed university to provide global visibility and outreach. As Director of Research and Dean, he managed over 100 research projects, modernized university farms and educational structure. Under his leadership Krishi Vigyan Kendras were developed as model district extension units, facilitating farmers in adopting improved technologies for enhanced productivity, profitability and sustainability and have bagged best KVK award by ICAR, continuously for four years. IGKVV under his leadership developed several technologies, including India's least expensive Soil Testing Kit, and models of rural livelihood security based on integrated crop production, resource conservation, and value addition. Under his leadership KVKs have done commendable work in reaching out to the farmers and rural youth and equipping them with entrepreneurial skills, and enhancing livelihood of tribes in Bastar region.



Life Time Achievements Award

Prof. R B Singh, Chancellor, Central Agriculture University



Professor RB Singh, in his career spanning over five decades has made immeasurable contributions in improving agrarian livelihood, food, nutrition and ecological security, cutting-edge research, higher education and policy and programs formulation; pursued in national, continental and global capacities. The distinguished scientist has made outstanding contributions in the fields of Genetics, Plant Breeding and Biotechnology, guided doctoral research of 45 Ph.Ds. and authored over 300 research and policy papers and 12 books. Prof. Singh had held several coveted positions both at national and international levels. The Padma Bhushan awardee was Assistant Director General of FAO for Asia and the Pacific. As Member of the National Commission on Farmers, he played instrumental role in nationwide consultations and writing voluminous reports. As Chairman of the Agricultural Scientists Recruitment Board and as Director of the prestigious Indian Agricultural Research Institute (IARI), Prof. Singh introduced many reforms to promote efficiency and result orientation. Currently the Chancellor, Central Agricultural University, the accomplished scientist, played pivotal role in furthering the agricultural interests of the country.

Best Animal Husbandry State Award

Government of Andhra Pradesh, which was received by Mr. JSV Prasad, Special Chief Secretary



Andhra Pradesh, home tract of world renowned breeds like Ongole and Punganur cattle and Nellore breed of sheep, is rich in livestock resources. Occupying 5th position in buffaloes, 2nd in sheep, and 3rd position in poultry, Andhra Pradesh, since its bifurcation in 2014, has achieved double digit growth rate of 12% in contrast to the average annual growth rate of 7% during previous decade, on account of introduction of several innovative schemes and programs, benefitting over 20 lakh households. The state, stands at 2nd position in egg production with 14170 million eggs, 4th position in meat production with 5.66 lakh tonnes and 5th position in milk production with 10.8 million tonnes in the country. Andhra Pradesh is the first state in India which has brought out a Fodder Security Policy in 2015 and has also introduced the world best practices of Silage and TMR feeding to increase yield of underfed animals. Mobile Veterinary Clinics have been established to cover 45 remote locations to take the technology to the door step of the farmers. The Government of AP is thus playing a leadership role in adopting a holistic approach to the development of Animal Husbandry sector for promoting the economic wellbeing of the farmers.

Best Horticulture State Award

Government of Chhattisgarh which was received by Mr. Brij Mohan Agarwal, Agriculture Minister and Mr. Ajay Singh, APC

Chhattisgarh, the tenth largest state in India, has two thirds of its population dependent on agriculture for livelihood. Known as the rice bowl of Central India, the state has started giving thrust to horticulture through innovative programs. As a result the area under cultivation of fruits increased from 0.46 lakh hectare in 2004-05 to 2.39 lakh hectare in 2015-16 and production in the same period increased from 3.23 lakh tonnes to 23.28 lakh tonnes. Area under cultivation and production of vegetables increased from 1.23 lakh hectare and 12.49 lakh tonnes in 2004-05 to 4.39 lakh hectare and 60.62 lakh tonnes respectively in 2015-16. Spices cultivation also showed marked improvement with area rising from 0.28 lakh hectare to 0.94 lakh hectare and production from 1.69 lakh tonnes to 6.59 lakh tonnes in the same period. The government has laid considerable thrust on increasing the area and productivity of horticulture in the state. Development of clusters of greenhouses and shed-nets, modernization of nurseries, special component for skills development in the horticulture sector are some of the strategies adopted by the government to improve horticulture. With futuristic policies and well-designed programs, the state of Chhattisgarh has made an indelible mark in the horticultural landscape of the country.



Africa Leadership Award

Dr. Ibrahim Mayaki, Chief Executive Officer, NEPAD and former Prime Minister, Niger

A scholar, diplomat and political leader, Dr. Ibrahim Assane Mayaki is the Chief Executive Officer of the New Partnership for Africa's Development (NEPAD), an agency for socio-economic development program of the African Union. Earlier, as Prime Minister of Niger, Dr. Mayaki launched many schemes with far reaching implications towards agriculture growth and food security of the nation. He introduced economic reforms and innovative legislative measures that brought out a sizeable Niger population out of poverty. From 2004 to 2009, he served as the Executive Director of the Platform in support of Rural Development in West and Central Africa, based in Dakar, Senegal with the mission to support policies related to the development of agriculture and trade as well as build the human capital. As the chief of NEPAD, Dr. Mayaki is playing critical role in mobilizing global resources and partnerships towards the development of Africa and making it food secure continent. For more than two decades, Dr. Mayaki has made tireless efforts and provided excellent leadership to wide range of programs in Africa ranging from food security to human health to education to energy to gender and youth empowerment, and thus played seminal role in the development of Africa.



International Leadership Award

Ambassador Kenneth Quinn, President, World Food Prize Foundation, USA



A former U.S. diplomat, Ambassador Kenneth Quinn, had a distinguished 32-year career in foreign service with the U.S. State Department, before moving in to food and agriculture sector. During his diplomatic career, he worked as a rural development advisor in the Mekong Delta, as the Deputy Assistant Secretary of State and as chairman of the U.S. Interagency Task Force on POW. Widely acknowledged for his expertise on global food issues, Ambassador Quinn assumed the presidency of the World Food Prize Foundation at Des Moines, Iowa in 2000. He single-handedly endeavored to raise the status of World Food Prize, founded by the Noble Laureate and key architect of the India's Green Revolution, Dr. Norman E. Borlaug. Ambassador Quinn's vision and extraordinary efforts over the years have brought the World Food Prize at par with the Noble Prizes. Each October, more than 1,000 people from over 70 countries gather in Des Moines for the Borlaug Dialogue international symposium, which is premier event on global agriculture. Under his leadership, the World Food Prize Hall of Laureates was completed with the purpose of inspiring future generations to emulate Dr. Borlaug by confronting hunger. Ambassador Quinn is today among the most admired names in the global agriculture community, who plays a key role in international agriculture, trade policies and global food security.



The Book “Eco Agri Revolution Practical Lessons & the Way Ahead” authored by Dr. MH Mehta released

A book on Eco Agriculture Revolution, by Dr. MH Mehta was launched during the inaugural ceremony of the 10th Global Agriculture Leadership Summit and Awards, 2017 organised by ICFA. This book is about moving from ‘Know How’ to ‘Do How’ and brings about rich experience in industrial research and farm scale demonstrations in different parts of the world to show the practical aspects of Eco agriculture.

ICFA signs MoU with German Agribusiness Alliance

ICFA signed a Memorandum of Understanding (MoU) with German Agribusiness Alliance (GAA) with the aim to promote trade, technology and business cooperation in food and agriculture sector of the two economies by providing policy advocacy, promoting investments. GAA is an initiative of leading associations and companies in the agro-food industry which aims towards improving fundamental national and international framework conditions for facilitating economic activities in and with the partner countries. Ms. Alina Gumpert and Mr. Alok Sinha on behalf of GAA and ICFA respectively signed the MOU. This collaboration is expected to accelerate the growth of Indian Agriculture and would address various issues that may facilitate greater cooperation between India and Germany and generate reciprocal awareness among the industries, investors, Government and other stakeholders about each other country for better understanding and cooperation.



ICFA signs MoU with IOWA State University, USA

A Memorandum of Collaboration was signed by ICFA with Iowa State University Seed Science Centre for better access to quality seed, encouraging seed exchange, and initiate cutting-edge research projects in seed sector to boost sustainable agriculture. The Seed Science Center at Iowa State University (ISU-SSC) is a center of excellence in Seed Science, Technology and Systems nationally and internationally. Mr. Manjit Misra and Mr. Alok Sinha signed the document. This collaboration would accelerate exchange of knowledge and enhance cooperation to boost sustainable agriculture.

International Agro Trade and Technology Fair (IATF 2018) launched

In a bid to introduce contemporary agriculture – Horticulture, Dairy Farming, Food processing technologies etc, along with their best practices that can inevitably help countless farmers and platform owners, ICFA is fully geared up to floor their next edition of IATF 2018. IATF will be an eye opener for the growers, wholesalers, importers, exporters and all other stakeholders of every segment of Agriculture and Farm Machinery, Equipment and allied sectors who want to expand and diversify their business and activities. On the theme of - Building Global Competitiveness, the event will showcase the best and latest in Indian Agriculture and Allied Sectors produced, manufactured and practiced in India and abroad, making it a significant platform for business partnerships worldwide. The platform will be an outstanding opportunity where local, regional and international investors can engage and evaluate promising investment opportunities. Three days fair would bring together local, regional and international livestock



breeders, extensive livestock keepers, processors, marketers, industry regulators, policy makers, Business Development Services providers, researchers, academia, farmers, NGOs, input suppliers, development sector, media, machinery suppliers, financiers, insurers, Indian & foreign companies related to Agriculture & Allied Sectors.

Crop Stewardship Program and AGROCERT Agency launched

ICFA launched the Crop Stewardship program and GAP certification Agency AGROCERT. Crop stewardship program primarily focuses on developing value chains for commercially important crops building upon their comparative advantage to maximize returns to farmers through organized efforts and international trade. AGROCERT aims to cultivate Good Agriculture Practices among farmers to promote environment friendly and sustainable agriculture which mandate to make certification process simple and affordable to benefit farmers. AGROCERT is an inspection and certification division of ICFA towards promoting sustainable agriculture and safe food production through crop stewardship and certification. AGROCERT is approved by Quality council of India (QCI) for its INDIA Good Agriculture Practices (INDGAP) Certification Scheme in conformity with ISO/IEC 17065:2012. This certification will enable farm produce to be internationally competitive, better price realization of the produce and secure and strengthen the livelihood of small and marginal farmers, while ensuring safety and quality of produce in the food chain.



ICFA Parliamentary Forum launched

ICFA launched a Parliamentary forum comprising of 25 Members of Parliament to strengthen the parliamentary focus on farm and farmers related issues supported with researched ground level information. The forum is chaired by Sh. Tariq Anwar, Senior MP and Former MOS (Agriculture) and convened by Sh. Ravi Verma, MP. This forum aims to represent the interests of the key stakeholders, importantly the farmers and channelize bonafide collective voice to the farmers at nation level and act as a platform for policy research and advocacy to relieve farm distress through developmental initiatives for better economic growth and rural social transformation.

Agriculture “agripositions.com” launched

With large number of agriculture graduates entering the industry year after year, the HR Agency specifically for agri professional, agripositions.com was launched. The agency will act as a platform to bring together the candidates and recruiters and facilitate in making informed decisions on career choices in agriculture sector. Agripositions.com aims to provide comprehensive HR solutions through a single window across various domains and envisages to enhance the success of clients in agribusiness sector and become the most reliable source of information on career opportunities in agriculture sector. Such an agency is crucial for accelerated growth of agriculture sector to suitably fit in the required human resources from vast pool of resumes and provide adequate employment opportunities.



India-US-Africa Partnership Platform launched

ICFA launched India -US -Africa partnership platform in response to changing dynamics of geopolitics and to mobilize resources for African Agriculture Development with the aim to end hunger and ensure access to safe and nutritious food by all and translating sustainable development goals for transforming African agriculture. Leveraging upon the vast bio and climatic diversity, Africa can increase productivity, and achieve food self-sufficiency in a decade. India as well as United States of America have historically been involved in African continent and have huge commitments for Africa. Both the countries in recent years have increased their funding through flagship programs; India under South - South Cooperation and US under Feed the Future Program. This Partnership Platform (USIAP) will mobilize Indian and US expertise and resources to translate their commitments into action to bring about food and nutritional security in Africa. The prime motto of this platform is to end hunger and ensure access by all people, in particular the poor and vulnerable, to safe, nutritious and sufficient food in Africa through sustainable food production systems and implementing resilient agricultural practices.

DR. BARWALE –WHO MADE INDIA SEED SOVEREIGN

24th July India woke up to the immeasurable loss of Dr. B. R. Barwale, the father of the Indian seeds industry. Barwale, who was 86, founded India's first private seed company, Maharashtra Hybrid Seeds Company Pvt Ltd (Mahyco), in 1964, which over the years had tremendous influence on what India sowed.

Born in Hingoli, Maharashtra on the auspicious day of Ganesh Chaturthi in 1931, Badrinarayan Ramulal Barwale could not continue his College Education as he got involved in the Freedom Movement of India as a young boy itself. However, as he developed his business, he went on to actively support the cause of education by building colleges and schools for the benefit of the community in his home town, Jalna.

Belonging to an agriculture family, young Barwale's motivation towards establishing Mahyco was evident. His strong conviction that seeds were the harbingers of food secure India led to the establishment of Maharashtra Hybrid Seeds Co.Ltd. (Mahyco) in 1964. The support and influence of institutions like Indian Agricultural Research Institute and Rockefeller Foundation brought his dream to fruition. "The man who made grey lands green and brought the green revolution to rain-fed agriculture of India. Dr Barwale realized early from his cultivation experience that seed is crucial for successful production and he saw productivity gains in wheat and rice being brought by genes. He used these technologies in Sorghum, Bajra, Cotton, Sunflower to enhance the productivity of dryland

crops. With same zeal he brought revolution in cotton through genetic engineering," says Dr. CD Mayee, President, South Asia Biotechnology Centre and Former Chairman of Agricultural Scientists Recruitment Board.

Research and innovation was critical to Dr. Barwale and in essence Mahyco became a carrier of his exemplary vision. Mahyco was quick to absorb the new trends in seed technology and was always a pioneer in introducing the same in the Indian market. "Being appreciative of the role of research and himself being a visionary, he could build Mahyco as one of the best seed companies, with excellent R&D infrastructure, in the world. His patience and perseverance were indeed most remarkable. For any new idea or suggestion, he was always open and would just say; Apan Dhyan Kara Lenge, (means he will get it examined).

In reality, I could understand that he will certainly get the matter implemented. His contributions to the Indian seed sector in particular and overall agricultural growth in general would be remembered with great appreciation," reminisces Dr. R.S. Paroda, Chairman, Trust for Advancement of Agricultural Sciences and Former Secretary, Department of Agricultural Research and Education & Director General of Indian Council of Agricultural Research.

The eminent team of breeders in Mahyco skillfully exploited hybrid technology to develop a series of high-yielding cultivars of sorghum, pearl millet, cotton, sunflower, pulses and oilseeds. Barwale was also instrumental in bringing Bt cotton into the country. Mahyco formed a 50:50 venture with Monsanto Investments to form Mahyco Monsanto Biotech and introduced Bt cotton varieties in 2002 which



changed the cotton economy of the country. India became a premier country in the production of cotton. The introduction of Bt cotton led to a dramatic increase in production across the cotton producing states and soon Bt cotton took over most of the acreage under cotton cultivation. Cotton production rose from 14 million bales in the pre-Bt year of 2001-'02 to 39 million bales in 2014-'15, a rise of almost 180%. India's cotton imports fell and exports grew.

“The passing away of Dr. BR. Barwale, the doyen and Samrat of Indian Seed Industry has left a huge void in the agricultural sector. I'm one of the millions of farmers who got benefitted by growing the hybrid seed developed by this great personality. His hybrids revolutionized Indian agriculture. Way back in 1990, when I was growing open pollinated cotton variety, I took up the cultivation of Mahyco Cotton Hybrid, MECH 1, which was introduced in 1984. It brought boundless happiness as the yield was much higher than the OPVs, I was growing until then. Again in 2004, my cotton production level shifted gear as I took up cultivation of the pest resistant Bt Cotton, viz MECH-162 Bt and MECH-184 Bt, which were introduced in the year 2002. The extra long staple cotton varieties (ELS Cotton) MRC Bt 6918 and MRC Bt 7918 are the real game changers in textile industry. By growing these varieties my economic condition substantially improved. The hairy leaves of his cotton variety are farmers delight as they ward off the sucking pest,” says Ravichandran VKV, a third-generation farmer from Tamil Nadu, India and a member of the Global Farmer Network in Iowa.

His contributions to Indian agriculture are immense and time heaped awards and honours on this visionary. In 1996, he received the prestigious award of Honorary Life Membership of FIS which is the International Apex body of the Seed Industry. In 1998, he received 12th World Food Prize by The World Food Prize Foundation, Des Moines, IOWA, U.S.A. In 1998, for his outstanding work, Crop Science Society of America recognized Mr. Barwale as Father of Seed Industry in India. The President of India awarded the Padma Bhushan Award in recognition of his distinguished service of high order in the field of Trade and Economic Activity, on March 21, 2001. On 14th March 2002, he received the Honorary Degree of Doctor of Science (Honoris Causa) from Tamil Nadu Agricultural University. On 16th June 2007, he received Honorary Fellowship Award from the Indian Society for

Cotton Improvement. Dr. Barwale has received several awards from several N.G.O.s, G.O.I. and professional associations.

Barwale's contributions extended beyond agriculture and his interest extended to several social causes as well. He closely supported many social and community organizations working for elimination of poverty and hunger in rural areas. The cause of education of children particularly girls from the underdeveloped areas has been one of his keen social interests and he had supported it actively through his own educational institutions. Making available quality healthcare to rural population was another of his life's missions. Taking inspiration from Sankara Nethralaya in Chennai, he had established a state of the art eye hospital, Ganapathi Nethralaya in Jalna, Maharashtra. This Institution, apart from providing affordable eye care (including certain number of free surgeries free of cost to needy), also has mobile eye care units serving the rural population of many surrounding districts. The Netralaya is geared up to perform 25000 surgeries annually.

His demise was a loss to humanity and the loss is manifested in the words of Dr. M.S. Swaminathan, father of India's Green Revolution. “With profound sorrow I have received the sad news about the demise of Shri Barwale. I have known him from 1950s when he used to come to IARI for discussions with Dr B P Pal and Sardar Harbhajan Singh. His commitment to building a seed industry based on science and farmers' well being, was well known even from those days. No wonder he is the first and only World Food Prize laureate in seed technology. To me the loss is a personal one, since he has been a source of advice and support from the beginning of MSSRF. The Barwale Hall which we have in our building will always remind us of the uniqueness of this great savant of Indian agriculture. He always used to say that we reap as we sow thereby emphasising the importance of good quality seeds. His commitment to bring the best in science to help the farmers was also clear from the ultra modern biotech lab which he established at Jalna. He was not only the leader of the global seed industry, but also a great humanist as is evident from his establishment of Ganpat Nethralaya. Apart from his professional qualities, he was remembered for his humanitarian and ethical values and for his generous philanthropy. He will always remain a role model for all of us.”

Round Table Conference on Role of Media in Agriculture

Agri News Network (ANN) launched by Agriculture Today Group
www.agrinetwork.com



Today, media receives significant share of our time and plays a crucial role in ensuring security, secularity and integration, boosting growth and development of a nation by giving knowledge, transmitting information, and raising voice as well as consciousness against wrong. The role and efforts of media are imperative as it helps in reforming, reshaping, educating and strengthening the society. The role of mass media continues to be crucially important for the development of agriculture sector. But, the agriculture media has not received the kind attention that underlines its importance. Media can become instrumental in connecting farmers with global markets and empowering them for realization

of Hon'ble Prime Minister's vision of doubling their income. To deliberate upon the issues and challenges in farm sector and role of media in agriculture growth and farmers' empowerment, ICFA hosted a National Round Table on Role of Media in Agriculture on September 15, 2017 at India International Centre, New Delhi.

The conference was chaired by veteran journalist Mr. Prabhu Chawla and graced by Ms. Alka Bhargava, JS Marketing Ministry of Agriculture and Dr. SK Singh Advisor to Agri Minister. The event observed the presence of various eminent personalities from the relevant field specially media. In all forty five esteemed executive members of Government associa-

tions, media persons, scientists along with policy makers and corporate heads were present for the brainstorming session.

Dr. M.J. Khan, Chairman, ICFA, welcomed all the delegates, media persons and members and underscored this program as unique and emphasized the important role of media in sensitizing farmer's issues and generating awareness by exposure of trade and technology to farmers and by making them competitive in market place. He raised the pertinent question of lack of coverage of agricultural issues by media. Calling the media as the voice of farmers, Dr. Khan specified five key major inferences viz; enhancing the centrality of agriculture in national economic system,

increasing trade negotiation that impact agriculture, sensitization of agricultural issues, mandatory time allocation for farm sector in parliament and ministries and reflection of farmer perspective in many of the decisions keeping in view the ground touch and roots of farmers. He brought to light one small step undertaken by ICFA to bring big change formation of All India Farmers Alliance which comprises of 32 farmer organizations making it a national level interaction platform.

Prof. MS Swaminathan, tele-conferenced and stated that media plays key role and ensures to bring and highlight all the things like science, technology and agriculture. "Media played important role in making green revolution a great success and showing India's capacity to feed itself and do well in agriculture sector," he observed. He also congratulated media for doing great work and hoped that it will continue to work for empowerment of farmers and mobilize agricultural growth in the country.

Ms. Alka Bhargava, JS Marketing, Ministry of Agriculture, raised the point that agriculture is not in the main canvas of media in spite of potential role of media in realization of Hon'ble Prime Minister vision of doubling farmers' income. She said that a very big issue faced by India is that even after being self-sufficient in production and exporting large quantities, farmers are not receiving their share of profit. She spoke about how number of flagship programs by Government of India like e-NAM, committees on doubling of farmers income, soil health card scheme etc can be strengthened by support and backing of media.

Mr. Pushendra, Farmer Leader, discussed the positive role of different types of media in building relationship, sharing information and connecting with diverse audience. He said that media plays a vital role in spreading awareness or disbursing news to all therefore credibility of media could be challenged if balance between different kinds of news is



not maintained.

Mr. Alok Sinha, ICFA, stressed on the importance of agriculture as source of livelihood for more than half of India's population and how it is fault of every individual to not be able to look through farmer's eyes. He, therefore suggested that there is this growing need to introspect to make media all-inclusive and address the genuine problem at grassroot level.

Dr. SK Singh, Project Director DKMA & Adviser to Agriculture Minister, said that media has a potentially broader role as an effective player in success of agriculture revolution and agriculture development. "There is need for media to walk hand-in-hand with farmers and help in dissemination of information. Media is in quite a unique position, potentially being the voice of policymakers, the voice of farmers, the voice of researchers. So, they potentially can be quite a powerful catalyst for change. The essential role of the media is to create opportunities for farmers to express themselves directly on the air: this is the only way that they will have a say and therefore participate in the decision process. Media is an inseparable part of agriculture revolution," opined Dr. Singh.

Dr. VP Chahal, ADG Extension, ICAR-

focused on the need of collaborating media with scientists to improve the communications between media and other participants involved in agriculture and rural development. Similarly for farmers to understand the news and to be able to interpret the real message there is need for regional channel news in regional and local dialects, he suggested.

Mr. Harendra Garg, Agri Reporter, Krishi Darshan raised multitude of constraints like lack of time, lack of coordination, dearth of seriousness and lack of editor's interest, which holds them back from reporting effectively on agriculture. He said that consequently, many researchers and others have a negative view of the media's ability to report accurately on agriculture. So one of the activities is to work with journalists to inspire them, provide them with greater confidence and motivation to become better agricultural reporters. "There is blooming obligation to focus on joint relationships of media persons with every participant involved in agriculture as prosperity of nation is synonymous to prosperity of farmers," he said.

Mr. OP Yadav, Agri Reporter, DD News discussed that there should be coordination between media and scientist so that scientist will understand media's point of making con-



tent compact and covering all the points and media will learn things from scientists. Joint meetings between universities, media, agriculture ministry and industries should be held on frequent bases to make better coordination. Training should be organized with emphasis on regional rather than national level as it makes more relevance. Joint working will help to make things better and easier.

Mr. Vir Sain Malik, Assistant Director, All India Radio, focused attention on training program for scientists and researchers and formation of expert team of scientists for farmer knowledge in all aspect of agricultural development. "There should be increased face to face interaction between scientists and farmers so that scientist can appropriately pen down the emotion of farmers. Collaborative approach is needed to make the research of farmer reach to farmer in farmer way," he said.

Dr. Ranvir Singh, Senior General Manager, International Panaacea, observed that scientists lacked communication skills and experience in knowing how to 'package' the information relevant to the audience or in using people to do this for them. He suggested that

when recordings with the scientist are done, the preference for location should be filed with farmers present to ask queries.

Dr. Hari Shankar Gaur, former VC, SBPUAT, talked about the role of media in educating farmers about the latest agricultural techniques and to work as a two-way channel between various structures of Agricultural Department in India. Thus, orientation and interaction of media with all research and development institutes is of paramount importance for: (a) carrying out agricultural information to the farming community and (b) to get genuine problems of farmers as feed back to researchers. "Balance is to be created between scientist and media by organizing open discussion. Media should not lose its focus of conveying information and bringing facts to light," opined Dr. Gaur.

Dr. M Moni, Chairperson, ICFA Working Group on ICT, talked about the media alternatives to lead future extensions by examining the role of social media in agriculture and how we can take advantage of internet. "Social media is viewed as the most powerful tool to connect with millions of people and its role can be strengthened by quality mass media

content generation; Location specific and timely delivery of news; enhancement of program by continuous capacity building; increasing participation of agriculture extension professional in mass communication; training courses to strengthen agricultural extension in state agricultural universities, central agricultural universities and deemed universities irrespective of whether they are government institution or private institution ; discussion on one commodity daily in 22 languages in krishi channel or some other channel; force agricultural scientist to put validated information and providing email id to each and every farmer.

Dr. Lakshmi Murthy, Director Documentation, MANAGE, talked about orientation of media to agricultural knowledge by increasing number of programs on community radio and initiating online courses to reach larger number of audience.

Ms. Lakshmi, PTI, insisted that to increase the media participation there should be mandate for publishing agriculture news. "The main issue is to overcome the basic fundamental of recognizing the importance of agriculture and publishing it on first page. This is customer driven sys-

tem hence media needs demand to be able to supply the relevant information. Many countries have made mandatory to give one news about agriculture on cover page and same could be replicated by Government of India," she recommended.

Dr. VV Sadamate, Convener, ICFA WG on Agriculture Extension, spoke about performance of agriculture extension. "There has to be well structured media module by R&D and those modules need to be promoted largely by extension network. There are issues of management and monitoring of agriculture network both at state and national level, which needs to be relooked," he suggested.

Mr. Sandeep Das, Special Correspondent, Financial Express, stressed on communication by distinction between agricultural and non-agricultural issues. "We have to provide the hooks, the interest, the innovation and the achievement. We need message ambassadors and we need media for agricultural development to become a multi-dimensional process. Agriculture spends least on communication when compared with other sectors," he observed.

Ms. Swapna Merlin, Special Corre-

spondent, The Print, spoke on the wide gap of disassociation of agriculture and public. There is deepening lack in taking pride and responsibility when it comes to agriculture, a major reason behind backwardness of agriculture.

Ms. Aruna T Kumar, English Editorial Unit, ICAR, talked about the diminishing respect for farmers and why farmers are not covered on front page given the fact that India is an agrarian economy.

Ms. Sonali Bisht, Adviser, INHERE, dealt with the issue of space given to agriculture journalism and suggested that international debates and topics of agriculture should also be covered by media to create awareness, bring key issues to discussion and stimulate action from within public and private sector for increased awareness, investments and innovation practices.

Mr. Amit Khare, PR Manager, Dhannuka, summarized the 5 C's for building great relationship and foresight which are: concern, commitment, capability, communication and compromise.

Dr. Patil, Extension Specialist, focused

on the interplay between general media and agriculture media and advocated that both should work together as an indispensable communication tool for farmers to connect with each other and educate others about their industry

Mr. S. Makhija, Consultant, Jain Irrigation Systems Ltd, underlined the growing rural-urban divide which is imposing new challenges and the need of the hour is to understand these challenges. One of the major challenges is lack of information and this can be overcome by two way traffic between farmers' problems and government interaction.

Mr. Kapil Mehan, Managing Director, Adventz India Ltd, stressed on role of media as an agent of change by reshaping the public opinion through engaging heart and mind of a viewer. "It needs sensitization and capacity building in use and application for agricultural development. With increase in income of the people there should be acceptance of high price for agricultural commodities which will help the farmers earn better living. Another important factor is that there are very different expectations between the media and other development partners (e.g. researchers, policy-makers etc)," Suggested Mr. Mehan.

Mr. Prabhu Chawla, Editorial Director, The New Indian Express, added that communication for agriculture is not seen as a major priority at either national or international level and the role of media as an effective player in agriculture development is undervalued. "This is because agriculture is indeed not glamorous subject and media is based on readership and viewership and everybody wants everything to be reported but there is always lack of space. Packaging of news is very important as news must influence and change the reader's life, so matter of fact is to find leaders that generate stories that must change mind. Media considers three W for any news to be released, viz What to convey, Whom to convey and what is the objective underneath," said Mr. Chawla.



THE TRUE LEADER



Shri Pawan Chamling, the undisputed leader of Sikkim has been in power for 5 consecutive terms making him India's longest serving Chief Minister. During the twenty four years of his Chief Ministerial terms, his path breaking plans,innovativeschemesandmoreimportantly his futuristic vision converted the hill state into one of India's greenest state. His vision for development was based on sustainability and environmental conservation.

Shri Pawan Chamling, the fifth and incumbent Chief Minister of Sikkim is also the longest standing Chief Minister in India, having won the legislative assembly elections for 5 terms in a row and who will be completing 25 years of governance by the next legislative elections in 2019 creating a political history in India. On 28 April 2018 he is set to be India's longest serving Chief Minister ever. Right now the record is with Jyoti Basu who was Chief Minister of West Bengal from 21 June 1977 to 6 November 2000 (23 years 4 months and 16 days).

The founder president of the Sikkim Democratic Front which has governed the state for five successive terms since



1994, Chamling was born on 22 September 1950 in Yangang, East Sikkim to Ashbahadur Chamling and Asharani Chamling. Mr. Chamling was persistently engaged in political activities during his early twenties and was actively involved in people's revolution of 1973. His political activities were initially through Sikkim Prajatantra Congress. A multifaceted personality, Chamling was also actively engaged in social, cultural and literary activities. Chamling was elected as the president of Yangang Gram Panchayat in 1982. Three years later, he was elected to the Sikkim Legislative Assembly for the first time. After being elected for the second time from Damthang, he became the Minister for Industries, Information and Public Relations from 1989 to 1992 in the Nar Bahadur Bhandari cabinet. After a series of major political upheavals in Sikkim, Chamling formed the Sikkim Democratic Front on 4 March 1993.

Chamling is the second chief minister in India after Jyoti Basu, of West Bengal to govern a state five terms in a row, with his party Sikkim Democratic Front winning the 1994, 1999, 2004, 2009 and 2014 Sikkim Legislative Assembly elections. His party first came to power in Sikkim after winning the 1994 assembly elections. His popularity kept soaring in Sikkim due to his developmental work and for maintaining peace. In 2009,

his party Sikkim Democratic Front won all 32 assembly seats in Sikkim Legislative Assembly. Following win in 2014 assembly election, he was sworn in as the Chief Minister of Sikkim for the fifth consecutive term.

The Chief Minister held a futuristic vision for the development of agriculture of this hilly state. Under his leadership, Sikkim undertook the initiative of converting the State into a totally organic one which initiated a new era in the history of organic agricultural movement in the country. Organic agricultural movement, so far spearheaded by the innovative farmers and civil society organizations entered policy planning process. Many other states started to define policies and declared their intention to embrace organic agriculture in one or the other way. He made a historic declaration by announcing a policy to transform Sikkim into totally organic State by passing a resolution in the Sikkim Legislative Assembly in the year 2003. With this, Sikkim became the first State in the country to enact such a far sighted and visionary policy. Twelve years later, Sikkim was declared as India's first fully organic state. Today the state contributes around 80,000 million tonnes of organic produce out of total 1.24 million tonnes produced in India. For his pioneering work in the field of organic farming, Pawan Chamling was honoured the Grand Prix Award at Germany's Lagau on the occasion of the One World Festival. His consistent attempts to preserve the environmental integrity of the state stems from his belief that clean air, water and appropriate climate are fundamental human rights, and ensuring these for the people is not a question of politics but a moral obligation.

Chamling, also a writer in Nepali and recipient of the Bhanu Puraskar (2010) was awarded by Sikkim Sahitya Parishad. He writes under the pen name Pawan Chamling Kiran. Chamling, loved by all of Sikkim, is a true leader who has the commitment and courage to convert his actions into reality.

“For the first time, a Prime Minister has put such a target in front of the nation for the welfare of farmers... The ministry is working on a seven-point Strategy to double farmers’ income by 2022. We are working in a planned manner. The first point is to increase productivity.”

RADHA MOHAN SINGH
Union Agriculture Minister



“Digitisation in the agricultural sector offers enormous potential: It enables agriculture to conserve limited resources such as water and soil and to handle them more efficiently. At the same time, digital solutions can assist in the application of fertiliser and plant protection products in an even more targeted, need-based manner, thus making food production more sustainable and transparent.”

CHRISTIAN SCHMIDT
German Federal Minister of Agriculture



“If there are clusters for industry, why should we not think about clusters for agriculture. Farmers have the right to access global markets and get better prices (for their produce) and for that we will put in place a good policy framework soon.”

SURESH PRABHU
Union Commerce Minister

“Our initiatives in Sikkim (Organic Agriculture) are led by the belief that clean air, water and appropriate climate are fundamental human rights, and ensuring these for the people is not a question of politics; it is a moral obligation. I also realize that governments alone cannot address this universal crisis. People, communities and governments must work together to overcome the dangers of a fast developing world.”

PAWAN CHAMLING
Chief Minister, Sikkim



“More than 40 lakh people directly or indirectly depend on the tea sector in Assam. A decent living standard, education for children, employment and health for the people belonging to tea community would be dealt on a top priority.”

SARBANANDA SONOWAL
Chief Minister, Assam