



An ICAR-CIPHET Publication

NEWSLETTER

September-October, 2018 | Volume 01 | Issue 02

"OUR MANDATE IS TO
REDUCE POST-HARVEST
LOSSES OF AGRICULTURAL
PRODUCE THROUGH
ENGINEERING &
PROCESSING
INTERVENTIONS"



Dr RK SINGH
Director

From the Director's Desk

ICAR-Central Institute of Post-Harvest Engineering & Technology (ICAR-CIPHET), Ludhiana, is a premier institute dealing with agricultural processing, value addition and reduction of food losses. We have made a lot of efforts to solve the problems associated with the post-harvest management of agricultural and livestock produce. In this connection, we have signed a Memorandum of Understanding (MoU) with Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution, Government of India. This MoU is related to development of protocols for shelf-life, safe storage, milling overrun and indicative norms for procurement of major pulses. A total amount of about Rs 2.4 crores is approved under this project and ten major partner institutes will be involved with ICAR-CIPHET as lead institute.

28th Institute Research Council meeting was organized during 28-29 September, 2018. All the R&D projects and extension activities were reviewed by the experts of post-harvest management of agricultural commodities. Two 21-days summer schools were conducted during last two months with the aim to provide knowledge and imparting skills in food sector to the participants from across the country. Entrepreneurship development, technology outreach and hands-on-training programmes were conducted at ICAR-CIPHET to provide technical know-how to the farmers, women, self help group members and prospective entrepreneurs. Many scientists from ICAR-CIPHET received awards at various international and national platforms for presenting their R&D conducted at ICAR-CIPHET.

Dr RK Singh



An ISO 9001-2015 certified organization

**ICAR-Central Institute of Post-Harvest
Engineering & Technology**

Ludhiana, 141 004 (Punjab)



EDITORIAL BOARD

Chief Editor
Dr RK Singh

Executive Editor
Dr Yogesh Kumar

Content Editors
Er Akhoun Asrar Bashir
Dr Renu Balakrishnan

For further information and to request a copy of the e-newsletter please contact:

Director, ICAR-CIPHET (ciphetyludhiana1989@gmail.com)

Central Institute of Post-Harvest Engineering & Technology, Ludhiana, 141 004 (Punjab) India

You may also mail to following addresses for further inquiries:

ysomvanshi@gmail.com

akhounasrar@gmail.com

renubalakrishnan@gmail.com

Disclaimer: The contents of this newsletter are purely informative in nature. Though all efforts have been made to keep the contents of this e-newsletter up to date, the same should not be construed as a statement of law or used for any legal purpose.

Patent has been granted to ICAR CIPHET 'Process for Dehulling Guar Seed for Refined Guar Gum Split Production'



(Patent Number: 302681; RK Vishwakarma, SK Nanda, US Shivhare)

In the present invention, a pretreatment for guar seed was developed for its easy dehulling and better recovery of refined guar gum splits. In the pretreatment process the guar seed is submerged into aqueous solution of up to 2% concentration of a food grade solvent in about 1:1 or more grain to solution ratio at a specified temperature for a predetermined, relatively short duration. The excess solution is drained from the sample and the solution present on the surface of the seed is removed. Then the seed is immediately fed to a dehulling machine where hull of the pretreated guar seed is detached. The hull is removed from the

dehulled lot using aspirator. The dehulled and unhulled seeds are separated using conventional grader. Dehulled seeds are dried using hot air to bring moisture content to about 10% (dry basis). Dehulled seeds are then split in to two halves using burr mill or any other suitable device. Polishing of the splits removes traces of germ from cotyledon. The refined guar gum splits thus obtained are separated from the germs using grader. The neat refined guar gum splits, thus obtained free from hull and germ, can be used to make better quality guar gum powder than by the conventional process.

Dr RK Singh, Director, ICAR-CIPHET conferred Eminent Scientist Award, 2017



Dr RK Singh, Director (ICAR-CIPHET) receiving award from Honourable Agriculture Minister, Bihar

Dr RK Singh has rendered 20 years of valuable services in areas of Watershed Development and Management, Micro water resource development, micro irrigation and protected cultivation in disadvantaged areas of NE India. Born on 07/01/1964 in Varanasi (UP) Dr Singh completed graduation and post-graduation in Agricultural Engineering from GB Pant University of Agriculture and Technology, Pantnagar in 1985 and 1996, respectively. He was awarded PhD degree from IIT Kharagpur (2010). Dr Singh advanced the knowledge in hydrology of hilly watersheds by parameterization and application of a physically process based model, namely WEPP in high rainfall and steep slope conditions. He played an active role in development of 4 model watersheds in the NEH region through treatment of 2050 ha area with appropriate soil and water conservation technologies and integrated farming systems on sloping lands resulting in sediment yield from 23 Mg ha⁻¹ in case of

untreated watershed to 8 Mg ha⁻¹ in case of treated watersheds. Dr Singh developed and standardized the method for LDPE lining of water harvesting tank and contributed significantly in the area of protected cultivation by developing and popularizing low-cost polyhouse for terraced land conditions, standardizing agrotechniques for strawberry and gerbera in protected conditions, and standardizing cropping sequence for round-the-year utilization of polyhouse with B:C ratio of >2.0 in NE India. Dr Singh has more than 65 publications in national and international journals, books, and book chapters. He is recipient of the prestigious ICAR-Vasantrao Naik Team Award-2006 for research applications in agriculture, Eminent Agricultural Engineer award-2015 by Institution of Engineers (India), eminent scientist in field of Agricultural Engineering -2018, elected fellow of Institution of Engineers (India) and Indian Association of Hill Farming. Dr Singh is life member of 6 professional bodies.

ICAR-CIPHET developed technologies were showcased by entrepreneurs in Agri Start-Up & Entrepreneurship Conclave at New Delhi



Union Agriculture Minister, Shri. Radha Mohan Singh Ji, Minister of State for Agriculture and Farmers Welfare & Panchyati Raj, Sh. Parshottam Rupalla Ji, Director, ICAR-CIPHET, Dr. R K Singh, and entrepreneur, Sh. Rakesh Verma during Agri Start-Up & Entrepreneurship Conclave at New Delhi.

Indian Council of Agricultural Research organized Agri Start-Up and Entrepreneurship Conclave on World Food Day at New Delhi. The event was inaugurated by Honourable Union Minister for Agriculture and Farmers' Welfare, Shri Radha Mohan Singh, in the presence of Minister of State for Agriculture & Farmers' Welfare and Panchyati Raj, Sh. Parshottam Rupalla and Secretary DARE and DG, ICAR Dr Trilochan Mohapatra. More than hundred agricultural based start-ups participated in

this conclave and showcased their products and machineries which they have developed and conceptualized with the help of scientists from various ICAR institutes. Dr RK Singh showcased the technologies developed by ICAR-CIPHET during this event. Honourable Union Minister appreciated the products and machinery developed by M/s Zoot India Company, Gurdaspur and M/s Black Nut Agri-food Machinery, Ambala. These entrepreneurs were facilitated by the scientists of ICAR-CIPHET.

28th Institute Research Council meeting was held at ICAR-CIPHET



28th Institute Research Council meeting was held at ICAR-CIPHET. Dr RK Singh, Director, ICAR-CIPHET, welcomed the experts and all the scientists in the meeting. He urged that scientists should focus on work according to the institute's mandate, available infrastructure facilities as well as farmer's need. He advised that scientists should work hard to increase the visibility of the institute among industries, farmers and entrepreneurs. Testing/analysis of the products may be outsourced if the facility for the same is not available in the institute. Thorough literature review should be done to identify the problem and research gaps. The project activities should be planned precisely to execute the project.

Dr DC Joshi, emphasized that scientists should formulate the project by devoting sufficient time. He also reiterated that the project selection should strictly be as per the institute's mandate. It should include burning issues, and be completed within the stipulated time period. He stressed that processing and value addition needs automation.

Dr SN Jha, in his remark advised that scientists should have 3 P's for research i.e. Passion, Persistence and Patience. He added that institute should look forward for collaborations with institutes like IIT's and NIT's for inclusion of automation in processing and value addition.

ICAR-CIPHET signed MoU with Department of Consumer Affairs, New Delhi



ICAR-CIPHET has signed a Memorandum of Understanding (MoU) with Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution, Government of India, New Delhi. Dr RK Singh (Director, ICAR-CIPHET) on behalf of Indian Council of Agricultural Research and Sh Abhay Kumar Singh, Director, Price Monitoring Cell, on behalf of Department of Consumer Affairs has signed this MoU. Dr RK Singh said 'this MoU is related to development of protocols for shelf-life, safe storage, milling outrun and indicative norms for procurement of major pulses. A total amount of about Rs. 2.40 crores is approved under this project and ten major partner institute will be involved with ICAR-CIPHET as lead institute'.

Dynamic storage of pulses involves huge investment in procurement, handling, transport, storage, milling, and further distribution. Thus, it becomes essential to have norms for storage, milling outturn ratio and indicative norms for procurement for best possible management of pulses in India. Dr Singh briefed that this project will develop pulse and dhal storage management practices norms for different regions of India. Moreover, the evaluation of the effect of storage conditions on shelf life, milling outturn ratio and dhal quality as well as identification of indicative norms for procurement of selected pulses for buffer stock management in present infrastructure will also be established after systematic studies under the project.

Dr RK Singh, Director, ICAR-CIPHET chaired a technical session in '13th Asian Maize Conference and expert consultation on 'Maize for food, feed, nutrition and environmental security'



Dr RK Singh, Director, ICAR-CIPHET at 13th Asian Maize Conference

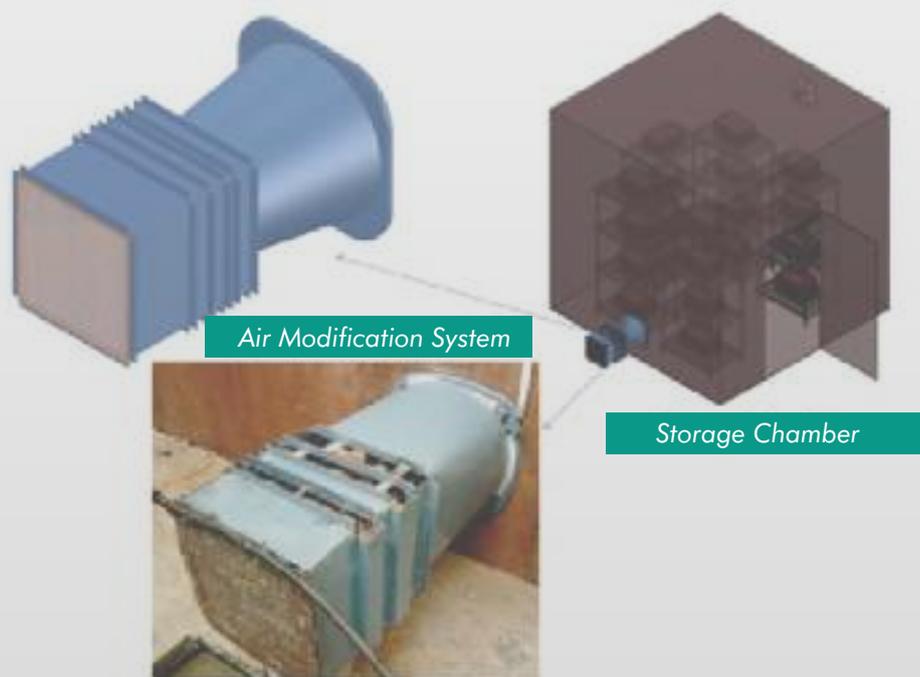
The 13th Asian Maize Conference and expert consultation on 'Maize for food, feed, nutrition and environmental security' was organised jointly by the Indian Council of Agricultural Research, the International Maize and Wheat Improvement Centre (CIMMYT), the ICAR-Indian Institute of Maize Research (ICAR-IIMR), Punjab Agricultural University (PAU), the CGIAR Research Programme on Maize (MAIZE) and the Borlaug Institute for South Asia (BISA), during 8-10 October, 2018.

Dr Trilochan Mohapatra, Secretary (DARE) & Director General (ICAR) inaugurated this event and motivated scientists to improve use of new technologies, such as marker-assisted selection for quality.

Dr RK Singh, Director, ICAR-CIPHET chaired a technical session in this conference. He elaborated the importance of Plasticulture in Indian agriculture for increasing the productivity of Indian crops. Overall, the conference had nine technical sessions on the aspects of the maize improvement through novel tools, enhancing farmers' income, socio-economics, crop management and conservation agriculture, farm mechanization etc. The delegates came from a broad range of stakeholders, including researchers, policy makers, seed companies, service providers, innovative farmers, and representatives of several development organisations and funding agencies.

INNOVATION & TECHNOLOGY

Low-Cost Air Modification System



A low-cost air modification system for storage of onions in ply-board storage structure ($3 \times 3 \times 3 \text{ m}^3$) was developed which can humidify and dehumidify the storage atmosphere as per the requirement of storage environment for onions. The unit has two functional parts: (i) evaporative cooling cum humidification; (ii) dehumidification by guar balls. The system was tested from June-Sept 2018 at HCP Division Abohar for maintaining the storage environment of onions. The system is capable of lowering the storage temperature maximum by 7°C along with raising relative humidity (RH) of storage environment nearly by 5% using 0.01 m thick cooling pad of 0.32 m length and 0.32 m width. Further, guar balls of nearly 25 mm diameter with 5-6% moisture contents (dry basis) were placed in three separate channels $0.32 \times 0.32 \times 0.05 \text{ m}^3$ (100 balls/channel) for reducing storage chamber RH. The maximum reduction in RH of 4.95% was observed after 40 h of placement of guar balls in the channels. After that, the balls became saturated, i.e., attained 18% moisture contents (dry basis); hence, the wet balls needed to be replaced by the dry balls for maintaining the recommended RH level of 60-70% for storage of onions.

ICAR-CIPHET concluded ICAR sponsored 21 days winter school



Release of compendium by Chief Guest, Dr Ramesh Kanwar, Hon'ble VC, LPU, Phagwara

India has now attained the phase where apart from improved production of good crops, emphasis is being laid on processing and their by-product utilization. In view of above, ICAR-CIPHET, Ludhiana organized an ICAR sponsored 21 days Winter School on "Recent engineering interventions in food and by-product processing for sustainable growth and profitability" during October 05-25 Oct, 2018. Dr Mridula D was the Course Director and Dr Deepika Goswami, Er Dhritiman Saha were the Course Co-Directors of this Winter School. Inaugural session was chaired by Dr Ramesh Kanwar, Hon'ble VC, LPU, Phagwara. During this inaugural session, a compendium of this winter school was released by the Chief Guest, which highlighted the global scenario

of the status of agricultural processing and by-product utilization in particular. The Valedictory function of this winter school was held on October 25th, 2018 with Dr Neelam Grewal, Member, Punjab Public Service Commission as Chief Guest and Dr RK Singh, Director, ICAR-CIPHET. Dr Neelam Grewal emphasized upon the importance of advance techniques in food processing to the scientific community and to effectively utilize the by-product and save the produce from quantitative and qualitative losses. Director, ICAR-CIPHET also highlighted the importance of recent post-harvest techniques in processing and value addition of agriculture produce which can play a significant role in doubling farmers' income by 2022.

ICAR-CIPHET organized Entrepreneurship Development Programme on 'Meat Processing & Value Addition'



Distribution of certificates by Chief Guest, Dr RK Singh, Director, ICAR-CIPHET

A three day Entrepreneurship Development Programme (EDP) on 'Meat Processing & Value Addition' was conducted from 20-22 September, 2018. This programme was aimed to impart hands-on training to the budding entrepreneurs in meat processing and related aspects of food safety, packaging and quality control. Special emphasis was given to train the candidates in development of novel meat products like low-fat and high-fibre meat snacks.

Dr SK Tyagi, PC, AICRP on PHET, advised the participants about the entrepreneurial opportunities in meat processing and the financial support available from different Indian government agencies and financial institutes. Dr Yogesh Kumar, Coordinator of this EDP acquainted the audience of different

meat based technologies developed by ICAR-CIPHET and the prospective returns to the start-ups on adoption of the modern technologies.

Dr RK Singh, Director, ICAR-CIPHET, presented the certificates to the participants in valedictory session and laid emphasis on the need of nurturing such meat processing start-ups. A compendium on Meat Processing & Value Addition was released in the session. Dr. Singh reaffirmed the support to the candidates in providing technical know-how for establishing their units. Akhoun Asrar and Dr RK Anurag (Co-Coordinator) asserted the plan to conduct this training again in the coming months considering the overwhelming demand and also on the persistent request of candidates who couldn't attend this time.

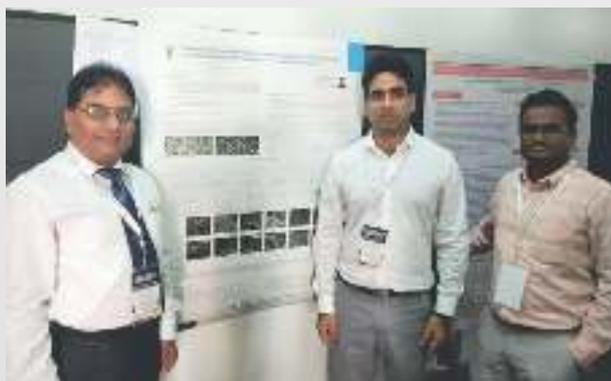
ICAR-CIPHET organized Entrepreneurship Development Programme on 'Nutritive Flour and Health Foods'



A five days Entrepreneurship development programme (EDP) for farmers, entrepreneurs and self help group members on 'Nutritive Flour and Health Foods' was organized during 22-26 October, 2018. This EDP was sponsored by Agricultural Technology Management Agency, Palampur, Kangra (HP). The programme was inaugurated by Dr RK Singh, Director, ICAR-CIPHET, Ludhiana. Speaking on the occasion, the Chief Guest of the function, Dr RK Singh emphasized on the importance of health foods and their huge market potential for profitability. He also mentioned that concept of health food is not new to India. We will have to search our ancient literature to reinvent what health food is all about and exploit those techniques and technologies for commercial purposes too. According to Dr Mridula D (Course Coordinator) this EDP was designed to give

participants a complete exposure to food processing, value addition, packaging of processed products, food quality and safety issues and FSSAI regulations for the unprocessed grains and processed food products. The programme comprised of various lectures, practicals and hands on training by experienced team of scientists from ICAR-CIPHET and distinguished experts from outside organizations. Dr Neelam Grewal, Member, PPSC, Patiala and Former Director, ICAR-CIWA, Bhubaneswar and Chief Guest motivated the participants for starting their own business based on the technologies learned at ICAR-CIPHET and encouraged the participants to inform about the ICAR-CIPHET food processing technologies to other farm families in their respective villages.

ICAR-CIPHET scientists participated in International Conference ‘Rural livelihood improvement by enhancing farmers’ income through sustainable Innovative Agri and allied enterprises (RLISAAe)’ organized at BITS, Patna and received best Oral and Poster presentation award



Dr Yogesh Kumar, Scientist (SS), bagged 1st position in Best Oral Presentation Award category for the paper ‘Effect of $W^1/O/W^2$ emulsion, aloe gel, and pea pod fibres as an edible fat replacer on quality attributes of low-fat meat batter’.



Dr Yogesh Kumar, Scientist (SS), bagged the 1st position in Best Poster Presentation Award category for the paper ‘Pediocin and *Murraya koenigii* berry extract: Antilisterial, antimicrobial and antioxidant effects in refrigerated (4 ± 1 °C) goat meat emulsion’.



Er Akhoun Asrar Bashir, Scientist, bagged the 3rd position in Best Oral Presentation Award for the paper ‘Effect of CO₂ enriched modified atmospheric storage on insect mortality and quality of green gram’



Er Navnath Indore, Scientist, bagged the 1st position in Best Poster Presentation Award category for the paper ‘Low-cost polytunnel dryer technology for farm household’.

ICAR-CIPHET scientist bagged Best PhD Student Awards given by Universiti Putra Malaysia (UPM), Malaysia

Dr Tanbir Ahmad, Scientist (SS), Livestock Products Technology, ICAR-CIPHET, Ludhiana has been selected for Best PhD Student by the Faculty of Agriculture, Universiti Putra Malaysia (UPM), Serdang, Selangor, Malaysia. On behalf of him, the award was received by Dr Awis Qurni Sazili, Associate Professor and PhD Supervisor. He was also given Doctor of Philosophy Award by the department of Animal Science, Faculty of Agriculture, UPM, Malaysia.



ICAR-CIPHET concluded ICAR sponsored 21 days summer school



Dr Rajbir Singh, Chief Guest, Director, ICAR-ATARI, Ludhiana

भाकृअनुप-सीफेट में हिन्दी पखवाड़े का आयोजन



मुख्य अतिथि अपर उपायुक्त, जगरावं, डॉ नीरू कटयाल गुप्ता द्वारा दीप प्रज्वलन

भाकृअनुप-केन्द्रीय कटार्ड-उपरान्त अभियांत्रिकी एवं प्रौद्योगिकी संस्थान (सीफेट), लुधियाना में हिन्दी पखवाड़ा (14-28 सितम्बर, 2018) का आयोजन किया गया। मुख्य अतिथि अपर उपायुक्त, जगरावं, डॉ नीरू कटयाल गुप्ता ने दीप प्रज्वलन कर विधिवत रूप से कार्यक्रम का उद्घाटन किया। इस अवसर पर वैज्ञानिक एवं स्टाफ सदस्यों को सम्बोधित करते हुए उन्होंने हिन्दी के प्रचार-प्रसार के लिए दिनचर्या में सरल शब्दों के प्रयोग पर बल दिया। भाकृअनुप-सीफेट, लुधियाना में वैज्ञानिक एवं प्रशासनिक कार्यों में हो रहे हिन्दी के उपयोग की मुख्य अतिथि ने सराहना की।

संस्थान के निदेशक, डॉ आर के सिंह ने कहा कि हिन्दी पखवाड़े को त्यौहार के रूप में मनाने से हिन्दी सशक्त एवं सामर्थ्यवान होगी। डॉ सिंह ने संस्थान के समस्त वैज्ञानिकों से अनुरोध किया कि वे अपने शोध-पत्रों को हिन्दी भाषा में प्रकाशित करने पर जोर दें। इस अवसर पर पखवाड़े के दौरान 15 दिनों विभिन्न प्रतियोगिताओं एवं कार्यक्रमों का आयोजन किया गया।

Dr RK Singh, PC, AICRP on PET visited AICRP-PET centre at PAU, Ludhiana

Dr RK Singh (PC), AICRP PET visited AICRP-PET, PAU, Ludhiana Centre. Dr Singh praised the technology 'a rooftop/terrace vegetable nutrition garden model for urban and peri-urban population using soil-less media'. Under this invention a rooftop/terrace vegetable nutrition garden model for urban and peri-urban population using soil-less media was developed under AICRP-PET programme. This model require only 12.6 sq m (net area = 4.2 m x 3.0 m) and gross area is of 20 sq m (5.5 m x 3.6 m). The

vegetable produced will be sufficient for a family of 2-4 persons and vegetables like Tomato, Bell Pepper, Cucumber, Coriander, Broccoli, Spinach, Pea, Lettuce, Fenugreek and Chinni sarson are being grown with staggered sowing/transplanting. Vegetables would be available round the year and the approximate cost of this model is around Rs 40000/-. However, with the adoption/popularization of the technology, the cost will be reduced drastically.



Ten vegetable varieties under cultivation at PAU, Ludhiana centre

A rooftop/terrace vegetable nutrition garden model for urban and peri-urban population using soil-less media

Dr SK Tyagi, PC, AICRP on PHET inaugrated APC at AICRP on PHET, Dr PDKV, Akola centre



Dr SK Tyagi, Project Co-coordinator, AICRP (PHET), CIPHET, Ludhiana suggested that farmers should adopt primary, secondary and tertiary processing for value addition to increase the farmers' income instead of selling the raw material as such. He also told the availability of subsidies and scheme from government to start the different agro processing based business. Dr MB Nagdeve, Dean, FAE focused on the importance of processing to get more benefit than traditional methods. Mr Deshmukh, progressive farmer proposed that farmers should start small agri-business along with

farming to uplift their income. All village farmers should work as a team and try to process their raw product at their respective places and sell it to near market so that money will retain in their villages were the words by Dr SK Patel, Research Engineer, PHET and Head, Food Processing Department, IGKV, Raipur. Shri Mahadeorao Bhuihar, Ex-Vice President, Shivaji Educational Institute, Amravati and Krishi Kirtankar pointed on how to improve the irrigation system in farming and get employment through Agro Processing Centre.

ICAR and DBT ink MoU for cooperation to promote agri biotech research

The Department of Biotechnology (DBT) and the Indian Council of Agricultural Research (ICAR) have signed a Memorandum of Understanding (MoU) for much-needed emphasis on multi-disciplinary R&D (research and development) activities and nurturing innovations in agricultural biotechnology research and education.

The former has undertaken several activities and programs to promote biotechnology R&D in the areas of agriculture biotechnology. The latter has been coordinating, guiding and managing research and education in agriculture, including horticulture, fisheries and animal sciences in the entire country.

Highlighting the importance of the MoU, Renu Swarup, secretary, DBT, said that 5-10 focussed programmes (short-, medium- and long-term) will be developed and implemented.

MoFPI invites proposals to set up mega food parks in uncovered states

The Ministry of Food Processing Industries (MoFPI) has invited proposals for the establishment of mega food parks (MFPs) under the Pradhan Mantri Kisan Sampada

Yojna in the states and Union Territories (UTs) that do not have any mega food park allocations so far.

It directed promoters from all the uncovered states (Goa, Manipur, Meghalaya, Sikkim and Tamil Nadu) and UTs to submit their applications by 5pm on February 9, 2019. In this regard, it has issued a notice seeking applications from the investors.

Fermented foods, including yogurt & kombucha, number one trend in 2018

Technically, fermented foods or drinks were among the first processed food products consumed by humans. For centuries, fermentation has been regarded as a preservation technique for extending the shelf-life of perishable foods. This age-old process has recently gained the attention of consumers due to their health benefits and distinct taste properties.

Consumers are becoming more conscious about their gut health and healthy bacteria are found in fermented foods. With recent advances in the understanding of gut-brain interactions, fermented foods have also been suggested as an efficient way for particularly cognitive function improvements.

Further, the aroma profile and taste sensation of fermented foods are also associated with the authentic and natural foods. According to "What's Trending in Nutrition" survey conducted by Pollock Communications and

Today's Dietitians in which 2,050 registered dietitians and nutritionists (RDNs) polled, "clean eating" and plant-based diets would be the two most popular diet trends for 2018 whereas the ketogenic diet (a low-carb regimen) that allows plentiful fats and protein intake—has moved to the No. 3 in this survey.

Meanwhile, there are about 12 processing aid categories that can be used by food business operators (FBOs) in the respective food

FSSAI releases SOPs for FSOs to ensure FSSR compliance of organic foods

FSSAI, India's apex food regulator, has released a set of standard operating procedures (SOPs) for the food safety officers (FSOs) to monitor the compliance to the Food Safety and Standards Regulations (FSSR) for organic foods.

"It was meant to serve as guidelines to the FSOs to inspect an organic product and traceability-related documentation," stated a senior FSSAI functionary.

The note released by the FSSAI stated, "Under Regulation 7 of Chapter II of the Organic Food Regulations 2017, the organic food product must comply with all the relevant provisions of the Food Safety and Standards.

Act for additives, contaminants, toxins and residues, along with labelling and packaging, amongst others "It was meant to serve as guidelines to the FSOs to inspect an organic product and traceability-related documentation," stated a senior FSSAI functionary.

IFFCO goes into joint venture with Spain firm – Congelados De Navarra to enter food processing Industry

IFFCO - one of the biggest fertilizer companies in India is foraying into food processing sector with entering into joint venture with Spain's Congelados De Navarra to start up a food processing plant at Ludhiana in Punjab with an investment of Rs 325 crores.

Congelados De Navarra is into processing of vegetables, fruits, herbs and ready-made pre-cooked dishes. It is a \$220 million company that has pioneered the individually quick frozen (IQF) technology.

The two companies have already identified 40-acre land for this purpose, and in the JV, IFFCO will have 30% stake while Congelados De Navarra will have the remaining 70 per cent stake. The proposed plant will source produce like potatoes, peas and cauliflower from farmers and then process them for sale in domestic and exports market.

FARMERS TRAINING & VISITS

Farmers Trainings

A training programme on 'Post-Harvest Management of Agricultural Produce' sponsored by Agricultural Technology Management Agency (ATMA), District- Akola, Maharashtra was organized for 30 farmers during 1- 3 October, 2018.



A training programme on 'Post-Harvest Management of Agricultural Produce' sponsored by ATMA, Nasik, Maharashtra was organized at ICAR-CIPHET, Ludhiana for 30 farmers from Nasik, Maharashtra during 26-28 September, 2018.



FARMERS TRAINING & VISITS

Farmers Trainings

A three day training programme on 'Post harvest technology of fruits, vegetables and grains' sponsored by Agricultural Technology Management Agency (ATMA), Pune Maharashtra was organized at ICAR-CIPHET, Ludhiana for 30 farmers from Shirur, Dist. Pune, Maharashtra during 29-31 October, 2018.



Farmers from Shirur, Maharashtra

KVK, ICAR-CIPHET, Abohar in collaboration with HCP Division organized Farmer-Scientist interaction programme on crop residue management on 24.10.18 at Village Mammu Khera. The talks on CRM were delivered by Dr Ramesh Kumar, I/c Head HCP Division ICAR-CIPHET, Abohar, Dr Sunil Kumar, Dr Ajinath Dukare, Dr Pankaj Kannaujia and Dr Vinod Saharan.



Farmers-Scientist Interaction Programme

'Mahila Kisan Divas' was celebrated at ICAR-CIPHET, Ludhiana and Abohar Campus



Women Farmers during celebration of Mahila Kisan Divas

A program on 'In situ crop residue management in Punjab' (11-15th Sept 2018) organized by KVK ICAR-CIPHET, Abohar



Certificate distribution by Dr RK Singh, Director, ICAR-CIPHET

'Vigilance Awareness Week' was organized at ICAR-CIPHET, Ludhiana and Abohar Campus



Women Farmers during celebration of Mahila Kisan Diwas

School camp for Vigilance Awareness Week was organized at HCP Division, Abohar



Dr Ramesh Kumar, I/c Head, HCP Division, ICAR-CIPHET, Abohar

ICAR-CIPHET, Ludhiana celebrated First monthly death anniversary of Bharat Ratna late Sh. Atal Bihari Vajpayee Ji, former Prime Minister of India



First monthly death anniversary of Bharat Ratna late Sh Atal Bihari Vajpayee Ji

Staff Recreation Club (SRC) of ICAR-CIPHET, Ludhiana organized event to observe First monthly death anniversary of Bharat Ratna late Sh Atal Bihari Vajpayee Ji, former Prime Minister of India on 16th September, 2018. A fitting tribute was paid to the deceased by the staff of the institute. A programme for recital of the poems composed by late Sh Vajpayee Ji was organized in the evening of 16th September,

2018 and many of his famous poems were recited by the scientific, administrative and technical staff of the institute. Dr Yogesh Kumar, General Secretary, SRC hosted the event and recited various poems of Sh Vajpayee Ji during this event. Er AA Bashir and Dr Deepika Goswami were also present during this event. Dr Mridula D also recited a poem of Sh Vajpayee Ji.

बाधाएँ आती हैं आएँ, धिरेँ प्रलय की घोर घटाएँ,
पावों के नीचे अंगारे, सिर पर बरसेँ यदि ज्वालाएँ,
निज हाथों में हँसते-हँसते, आग लगाकर जलना होगा।
कदम मिलाकर चलना होगा।

Participation in Kisan Mela/Agri-Expo/Farmers Meet/International Seminar/R&D Programmes

Kisan Mela at PAU during 20-22 Sept, 2018



Dr Yogesh Kalnar, Dr D Saha and Dr Bidya during Kisan Mela at PAU

Agri-Expo and Mega Farmers Meet in Krishi Kumbh at ICAR-IISR, Lucknow during 26-28 October, 2018.



Dr Sandeep Dawange at Agri-Expo and Mega Farmers Meet

Participation in Kisan Mela/Agri-Expo/Farmers Meet/International Seminar/R&D Programmes

Food Industry and Craft Mela 2018 at PAU on 30 October, 2018



Food Industry and Craft Mela 2018 at PAU

Participation in Technical Education Quality Improvement Program (TEQIP) as an external reviewer on 17th October, 2018 at IIT Delhi, Sonipat campus.



Dr Yogesh Kalnar at TEQIP

Staff Recreation Club organized talk on 'Future Investment Plans'



Staff Recreation Club, ICAR-CIPHET has organized a talk on 'Future Investment Plans' for the employees of ICAR-CIPHET. Professionals were invited from State Bank of India to deliver a lecture on current and future investment policies to gain utmost financial benefits for individuals. Er AA Bashir, Cultural Secretary of staff recreation coordinated this talk. Dr RK Singh, Patron, SRC, ICAR-CIPHET and Director, ICAR-

CIPHET was also present during this event. Vote of thanks was proposed by Dr Yogesh Kumar, General Secretary, Staff Recreation Club, ICAR-CIPHET. Dr Yogesh said that every individual should opt for financial policies with due care keeping their present and future financial needs in view. Before making any investment one must ensure all formalities and related terms and conditions .

Staff Recreation Club organized Hariyali Teej Festival

GLIMPSES



Cultural Events

**Staff Recreation Club organized
Janmashtami Festival**

GLIMPSES



Langar Seva

हिन्दी पखवाड़ा, 2018

इलकियाँ





Produce | Process | Prosper

ICAR-CIPHET

Estd. 1989