



**Central Institute of Post-Harvest Engineering &  
Technology, Ludhiana**  
Our Slogan: Produce, Process and  
Prosper



**CIPHET E - Newsletter for January - February, 2014**  
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**Director's Column**

Dear esteemed readers,

First of all, it gives me an immense pleasure to inform the esteemed readers that I have assumed the responsibility as Director, CIPHET. I have a deep sense of appreciation and render my gratitude and regards to the CIPHET family. I would make all my best efforts to make a global institute in post harvest research and increase its visibility at International level as well.



CIPHET organized a Rashtriya Sangoshthi on “Khadya Prasanskaran Evam Prabandhan: Udyamiyon Ke Liye Swarojgar Kee Sambhavanayen” in collaboration with Indian Society of Agricultural Engineers (Punjab Chapters), PAU, Ludhiana. The two day event was a big success as a large number of research papers in Hindi were presented during the two days deliberations.

AICRP on PHT organized sectoral PI (SPI) meeting for formulation and finalization of new project proposals to be presented by Cooperating Centres in the forthcoming Coordinating Committee Meeting (CCM) of the AICRP on PHT scheduled in the month of March at CIPHET.

As a part of the triangular Programme of India-US-Africa, Govt. of India, a visit was organized by MANAGE, Hyderabad for the senior level delegates from Republic of Malawi at the institute.

Business Planning and Development (BPD) Unit, a NAIP initiative was inaugurated at CIPHET, Ludhiana. BPD CIPHET in collaboration with PAU kisan club organised interaction meeting during PAU kisan club meeting.

CIPHET developed technologies and products were showcased during many seminars, workshops, kisan melas etc. held at different places.

I congratulate CIPHET staff for getting ISO 9001: 2008 certification for "Research and Development, Training and Extension on Post-harvest Engineering and Technology".

I also congratulate all the scientists who got awards and promotions.

With best regards,

**R.K. Gupta**  
Director

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### ***Dr. R.K. Gupta joins as Director CIPHET***



Dr. Ram Kishor Gupta has taken over the charge of Director, CIPHET on 14 February, 2014. He addressed the scientists of CIPHET and said that he would make the best efforts to see CIPHET as a global institution in the field of post harvest research and increase its visibility in national and international arena with its work. "We should preserve high moral values, punctuality, respect and honesty," he said, advising the staff to be punctual, sincere and dedicated for work. He also laid stress on the importance of planning for better execution and timely output.

Dr. R.K Gupta obtained Bachelor's degree in Agricultural Engineering from Allahabad University and M. Tech. Degree in Post Harvest Engineering from Indian Institute of Technology, Kharagpur. Further, Dr. Gupta had obtained PG Diploma in Food Processing Management from International Institute of Management, Masstricht, The Netherlands in 1992 and Ph.D. from IIT Kharagpur in the area of Agricultural Food Engineering.

More than 28 years, he is engaged in experience in research & development and training in the area of post harvest technology and engineering of food crops. His area of expertise are horticultural crop processing, oilseeds processing, minor millets processing and value addition, and novel products development. Dr. Gupta is having proven record of scientific contribution with sufficient published work in his credit. He is also one of the authors of five books and had authored many research bulletins, technical reports and extension leaflets. He is also life member of various professional societies like ISAE, AFST (I), Bioved Research Society, Oilseeds Research Society and Research Association of Gender in Agriculture. He is also a Fellow of Institution of Engineers (India) and having other awards of professional societies. He had opportunity to chair sessions as Chairman/Co-chairman of many national as well as International Conferences. He has also visited Netherlands and England to enrich his knowledge in the area of post harvest technology and management. He was also member of Indian delegation of Subcommittee on FST to ASEAN Country and visited Thailand and Singapore for developing Research Proposals on Food Science and Technology.

## ***Rashtriya Hindi Sangoshthi Organized***

CIPHET organized a Rashtriya Sangoshthi on “*Khadya Prasanskarana Evam Prabandhan: Udyamiyon Ke Liye Swarojgar Kee Sambhavanayen*” during Jan 28-29, 2014 in collaboration with Indian Society of Agricultural Engineers (Punjab Chapters), PAU, Ludhiana. Dr. K. K. Singh, Additional Director General, (Process Engineering) graced the occasion as chief guest and Dr. Bangali Baboo, Former National Director, National Agricultural Innovation Project was the Guest of Honour. Dr. A.K Singh, Chairman, ISAE (Punjab Chapter) and members of organizing committee and delegates were also present during the two day sangoshthi.



Dr. R. K. Gupta, Coordinator of this seminar, briefed about seminar theme and highlighted the importance of food processing sector in India. Addressing the inauguration function, Dr. S.N Jha, Ex Director (Acting), CIPHET emphasised about importance of Hindi language in scientific knowledge dissemination. He stressed on the impact of Hindi in entrepreneurship development. Dr. Bangali Baboo said that it is high time for entrepreneurs to understand the opportunities in the food processing sector. He also highlighted the importance of food and by-product processing for sustaining agriculture economics. Dr. K.K Singh informed about the programmes of MoFPI, for providing support to small scale entrepreneurs, farmers and industrial partners.

On this occasion, seminar ‘Smarika’ and BPD publication were also released and BPD incubation facility was inaugurated. BPD CIPHET incubatee S. Jagtar Singh exhibited amla products, developed by using CIPHET incubation facility. Other BPD entrepreneurs Mr. Rajvinder Singh, Mr. D.S Oberoi, Mr. Paramveer Singh and Mr. Vikramjeet Pal also attended the programme. In the seminar, more than 71 scientific papers were delivered by the participants from all over the country.

Dr. Mridula D., Co-Cordinator, of seminar informed that seminar was divided into four plenary sessions namely ‘processing and management of food grains and oil seeds’, ‘processing and management of fruits and vegetables’, commercial and other crop processing and ‘processing and management of animal and fish’.

## ***AICRP on PHT Sectoral Meeting Organized***

All India Coordinated Research Project on Post Harvest Technology (AICRP on PHT) organized Sectoral Principal Investigators (SPI) meeting on February 8, 2014 for prioritization of Research programme to be discussed & finalized in next Coordinating Committee Meeting (CCM). The meeting was presided by Dr. K. K. Singh, ADG (PE), ICAR, New Delhi. Dr. S. N. Jha, Ex-Acting Director, CIPHET, Dr. R. K. Gupta, PC (PHT), Dr. P. C. Sharma, Head, HCP Division Abohar, Dr. S. K. Nanda, Principal Scientist and Incharge, Head, TOT, Dr. S. K. Aleksha Kudos and other scientists of CIPHET graced the occasion. Dr. P.A. Borkar, SPI (Horticultural Crops) presented the objectives and technical programme of the research proposals pertaining to post harvest aspects of horticultural crops and Jaggery sector. In the sequence, Dr. R.K. Visvanathan SPI (Food grains) presented technical programmes of food grains sector. Dr. K. K. Singh, ADG (PE) emphasized on end to end approach and suggested to take up projects on complete value chain of the commodities.

## ***Visit of Delegates From Republic of Malawi***

As a part of the triangular Programme of India-US-Africa, Govt. of India, a visit was organized by MANAGE, Hyderabad for the senior level delegates from Republic of Malawi on 27-02-2014 at CIPHET, Ludhiana. Dr. P. Chandrashekara, Director (Agril. Extn), MANAGE, Hyderabad was the coordinator of the delegation. Dr. WG Lipita, Controller of Agricultural Extension and Technical



Services, Ministry of Agriculture, Irrigation and water resources was the controlling officer from the Republic of Malawi. The delegation group consisted of nine senior executives equivalent to Principal Secretaries/Commissioners/ Directors of Agriculture of Govt. of India.

## ***Incubation Facility Inaugurated***



Business Planning and Development (BPD) Unit, a NAIP initiative was inaugurated at CIPHET, Ludhiana on 28<sup>th</sup> January 2014 during two days National Seminar on Food Processing and Management: Opportunities of self employment for entrepreneurs (in Hindi). On this occasion BPD brochure and Incubation facilities were launched by renowned guests. Chief guest Dr. Bangali Baboo, Former National Director NAIP, Dr. K. K. Singh ADG (PE), ICAR and Dr. W. S. Dhillon, Director, Punjab Horticultural Post- harvest Technology Center (PHPTC), Ludhiana, Director (Acting) Dr. S N Jha, Dr. R K Gupta, PC PHT, Dr. D. M. Kadam, PI BPD and Prof. V. K. Sehgal Ex Prof PAU were present during the occasion along with other dignitaries. BPD CIPHET will provide facilities (on payment basis) like:

### ***Infrastructure Support***

- Appropriate size of office space each on exclusive as well as dual sharing basis.
- Basic set of furniture with Limited availability of internet
- Common facilities like fax, printer, newspaper, access to cafeteria etc.
- Conference room and admin support.

### ***Operational and commercial support***

- Referral to funding agencies/VC
- Promotion through various available platforms (website, exhibitions etc).
- Guidance in business plan preparation
- Guidance in conducting market surveys and feasibility analysis
- Interaction with successful entrepreneurs

### ***Scientific mentoring***

- Advice from scientific experts of the domain
- Training and skill development
- Guidance for establishment of independent production unit

Apart from the above, BPD will help to transfer the technologies developed by CIPHET to entrepreneurs and train them on that technology. BPD CIPHET will work as single window system for people coming for taking technologies, training and guidance.

### ***BPD Created Awareness During Kisan Club Meeting***

BPD CIPHET in collaboration with PAU kisan club organised interaction meeting on 2<sup>nd</sup> January 2014 during PAU kisan club meeting. During this meeting Mr. Ajay Agrawal, Business manager, BPD gave the presentation on CIPHET developed technologies creating awareness among the Punjab farmers about post-harvest engineering and technology, food and agro processing and machine manufacturing. It was also emphasised that the NAIP (World Bank) initiative under ICAR at CIPHET, Ludhiana for setting up of BPD incubation facilities is to assist and support entrepreneurs and youths who wish to make career in food processing. About 250 farmers attended this event.



### ***CIPHET Awarded ISO 9001:2008***

CIPHET has been awarded the ISO 9001: 2008 certification for "Research and Development, Training and Extension on Post-harvest Engineering and Technology".

### ***Scientists Awarded***

- The team of scientists (Drs. SK Nanda, RK Vishavakarma, Anil Rai, HVL Bathla, VK Sehgal, PC Sharma, Robinson J, Abraham and Pitam Chandra) received a **Team Award – 2013** during the 48<sup>th</sup> Annual Convention of ISAE and Symposium on Engineering Intervention in Conservation Agriculture web during February 21-23, 2014 at MPUAT, Udaipur for Assessment of Harvest and Post-harvest losses of major crops and livestock Produce in India.
- Dr. Sangita Bansal, Senior Scientist (Biotechnology) received **Young Scientist Award** (Biotechnology) 2013, conferred by the executive committee of Society for Plant Research (Regd. No. IB 14052-88 established in 1988), on the occasion of National conference on perspectives and trends in plant sciences and biotechnology at Panjab University, Chandigarh during 21-23 February, 2014 for her outstanding contribution in the field of Plant Biotechnology.
- Dr. Manju Bala, Sr. Scientist got the **best poster award** for the abstract entitled “Biochemical marker for salinity in rapeseed-mustard” in the 2<sup>nd</sup> National Brassica Conference on ‘Brassicas for addressing edible oil and nutritional security’ held at PAU, Ludhiana during February 14-16, 2014.



### ***CIPHET Technologies Showcased/Demonstrated***

- CIPHET participated in National Agriculture Fair Cum Exhibition Krishi Vasant 2014 for showcasing post-harvest



technologies during 9–13 February 2014 held at Central Institute of Cotton Research, Nagpur. Krishi Vasant-2014 was jointly organized by the Ministry of Agriculture, Government of India and Government of Maharashtra. The exhibition was inaugurated by Sh Pranab Mukherjee, the Hon'ble President of India. Sh Sharad Pawar, Union Agriculture Minister, Sh Pruthviraj Chavan, Chief Minister of Maharashtra, Sh Radhakrushna Vikhe Patil, Agriculture Minister, Govt. of Maharashtra graced the occasion with their auspicious presence. Around 80 ICAR institutes and 30 *Krishi Vigyan Kendras*(KVKs) from different parts of country participated in the exhibition to display their scientific achievements through attractive displays, machines and products. Similarly government, semi-government, co-operative, NGOs and private institutions also participated in the exhibition. CIPHET displayed various technologies for the post-harvest sector. The exhibitors took keen interest at the CIPHET stall. The main attraction of the stall was custard apple pulper, pomegranate aril extractor, soybean and groundnut products, green chili products etc. Notably, the five-day Krishi Vasant was the biggest ever national agriculture fair organized at Central Institute for Cotton Research. It concluded with the felicitation of enterprising farmers from different sectors representing different states.

- Business Planning and Development (BPD) Unit of CIPHET Ludhiana participated in 12<sup>th</sup> Rural Technology and Crafts Exhibition organized by the National Institute of Rural Development (NIRD) at Hyderabad from 14-19 February, 2014. Exhibition was inaugurated by honourable Director General (DG) of NIRD Dr. M.V. Rao in the presence of several dignitaries and renowned business personals from all over the country. In a 6 day event, CIPHET had put its stall to demonstrate and display the post-harvest technologies and machinery developed by it. About 30 potential clients had shown interest in CIPHET developed technologies, such as agro/food processing machinery, groundnut based milk beverage, paneer and curd technology, evaporative cooled room structure, pearl millet based extrudates, pasta and weaning mix technology, fish processing machinery and technology, meat processing technology, tomato processing plant, bamboo processing and preservation technology, fruit beverage technology, oil extraction technology, tamarind processing and other medicinal plant based technology, roti/chapati making machine etc. Visitors and clients found the BPD CIPHET stall very helpful and highly innovative as they discovered several technologies and machinery related to their field/business, for the very first time. Clients are interested to adopt CIPHET developed post-harvest machinery and technology in their existing business/establish new business.



- Business Planning and Development (BPD) Unit and TOT Division participated in Progressive Punjab Agricultural Summit 2014 at Chappar Chiri, Mohali, Punjab from 16 to 19 February 2014. In this 4 day event, CIPHET had put its stall to demonstrate and display the post-harvest technologies and machinery developed by CIPHET at ICAR pavilion along with other ICAR institutes. Dr. R K Gupta,



Director, Dr S K Nanda, I/c Head TOT, Dr Indu Karki and Mr. Ajay Agrawal, Business Manager BPD along with other CIPHET scientists attended the exhibition and made the farmers aware about the CIPHET's technologies and Incubation facilities available at CIPHET. Many farmers, entrepreneur and business persons visited stall and took keen interest in CIPHET Developed technologies. Many persons visited CIPHET, Ludhiana to get more information and potential transfer of technology and trainings in near future.

- Four demonstrations and trainings of Makhana popping machine were held in Darbhanga, Madhubani, Katihar district of Bihar

### ***Trainings Organized***

- CIPHET conducted a hands-on training program on 'Soybean processing for milk and tofu' at Ludhiana during Feb 3-5, 2014. Two participants from districts of Ludhiana and Sangrur, Punjab attended the programme. After the training, the participants showed willingness to start their own venture. Notably, CIPHET regularly conducts various trainings in post harvest technologies. These trainings are need based as well as sponsored trainings. The training was coordinated by Dr Tanbir Ahmad, Scientist in the Transfer of Technology division.
- A training on 'Handling and processing of turmeric' was conducted at CIPHET campus for 30 farmers from Maharashtra during January 13-16, 2014. It was sponsored by Agriculture Technology Management Agency (ATMA), Wadgaon, Chandrapur, Maharashtra. The training consisted of lectures and practicals, such as 'Basics of turmeric and its processing', 'Estimation of moisture level in raw turmeric', 'Handling, cleaning and processing of raw turmeric', 'Solar tent dryer-a low cost drying technique for turmeric', 'Packaging techniques for turmeric powder, 'Estimation of colour intensity in turmeric and drying of sliced turmeric and powdering' etc. An exposure visit to Gurdaspur turmeric plant was also conducted to encourage the farmers for entrepreneurship. The training was coordinated by Dr. Armaan U. Muzaddadi, Sr. Scientist, CIPHET, Ludhiana who also demonstrated a low cost technique of drying using solar energy. Dr S. N. Jha, Acting Director CIPHET interacted with the farmers to record the needs of farmers for extending turmeric based industries in the region. Few farmers were enthusiastic to learn the technologies and showed their interests to start turmeric processing small industries in their region. In their evaluation of training programme, all the farmers expressed that the training was highly beneficial for them.
- Training on 'Post-Harvest Management' under Maharashtra Agricultural Competitiveness Project (MACP), Vanamati, Maharashtra (17-21 February, 2014) and Farmers from Gondia, Maharashtra (24-27 February 2014) was organized at CIPHET, Ludhiana. Dr. R. K. Gupta, Director addressed the inaugural session and apprised the participants about CIPHET's activities in the area of post-harvest research and technology development. Dr. A.U. Muzaddadi, Senior Scientist coordinated the meeting. The training included lectures, practical in different aspects on agricultural, horticultural, animal sciences and fisheries post harvest management which will include topics such as cold storage technology, processing and value addition technologies for oil seeds, processing of pulses, processing of maize, wheat, turmeric, ginger, onion, storage of cereals and pulses, potato waste utilization, honey processing, packaging of fruits and vegetables etc.

- As a part CIPHET technology transfer, three days training on “Minimal Processing Vegetable Technology” was conducted during 27 February to 1<sup>st</sup> March, 2014. BPD unit coordinated the activity of technology transfer to Mr. Abhinav Soni from Meerut. Accumulation of surface water on the fresh and minimally processed vegetables is a matter of concern as it helps in growth of pathogens and microorganisms. A basket centrifuge consisting of a detachable perforated cylinder helps to remove surface water from the minimally processed vegetables. Packaging systems and packaging materials play an important role in enhancement of shelf life of fresh and minimally processed vegetable.

### ***Presentation delivered to African professionals***



Dr. D. M. Kadam, Senior Scientist (AS&PE) and PI BPD gave presentation on “CIPHET developed technologies on Post-Harvest Engineering and Technology” to the 25 food processing professionals from 5 African countries i.e. Cameroon, Uganda, Mali, Angola and Kenya on 27 February 2014. Two-week training program on “Development of

Agribusiness and Food Processing Business Incubation Centres in Africa” under India-Africa Forum Summit (IAFS)-II 2013-14 from February 18 to March 01, 2014 was organised by ICRISAT, Hyderabad. It was great opportunity to showcase the CIPHET developed technologies to Africans and hold B2B meeting with interested participants through this training programme. Interested participants have approached BPD for technology and consultancy.

### ***Programmes Attended***

- Dr. P.C Sharma delivered lecture on Prospects of Horticulture Crop Processing in a Entrepreneurship awareness programme on Rural Godowns Organized by NABARD, Directorate of Marketing and Inspection and NITCON at CIPHET Abohar on 22 January, 2014.
- Dr. P.C Sharma delivered lecture on guidance for establishment of fruit and vegetables processing unit to the trainees/ unemployed youth of Malout in Programme organized by NITCON on January 8, 2014

- Dr. H.S. Oberoi participated in the India-UK Scientific Seminar on Structural elucidation of microbial natural products: Opportunities and Challenges, sponsored by the Department of Science and Technology, Government of India and The Royal Society, London at Mizoram University, Aizwal, Mizoram from January 14-17, 2014 and made a presentation on “Cellulases-Characterization for functional and catalytic properties”. The seminar was attended by scientists from ICAR, CSIR Institutes, Central Universities, NITs, DRDO from India and scientists from the University of Aberdeen, and the University of Strathclyde, from UK.



- Dr. Sandeep Mann attended national seminar on “Reorientation of Agricultural Research to Ensure National Food Security” and delivered a lecture on” Role of agro-processing in income & employment generation” at CCS HAU Hisar during January 06-07, 2014.
- Dr. Sandeep Mann and Dr. Anil Kumar Dixit attended 6<sup>th</sup> refresher course on “Agricultural Research Management” at NAARM Hyderabad during February 03-15, 2014.
- Dr. S.K. Devatkal delivered a lecture during IAVPH on “Applications of high pressure (HPP) in meat processing and food safety” during February 4-5, 2014 at Assam Agricultural University, Assam
- Dr. D. M. Kadam, Senior Scientist (AS&PE) attended 2 days Karnataka Agricultural Engineers Association (KAEA) Conference and Silver Jubilee Programme of the College of Agricultural Engineering, Raichur (Karnataka) on Feb 15-16, 2014. The Conference was organized to create awareness, importance and role of Agricultural Engineers in development of Nation. Many dignitaries such as Dr. V. M. Mayande, President ISAE, Dr. S. A. Patil, Chairman, Karnataka Krishi Mission, Govt of Karnataka, Dr. N. L. Maurya, Farmer VC RAU, Pusa, Dr. B. V. Patil, VC UAS Raichur, Dr. P. Balakrishnan, Dean CAE, Raichur etc were present during conference inaugurated. Many Agricultural Engineers of CAE Raichur Alumina attended the conference and shared the knowledge, status of Agriculture Engineering in different field and future prospectus. It was great to know that Agriculture Engineer is playing great role in many fields for nation development.



### **Promotions**

- Dr. K. Narsaiah, Sr. Scientist was promoted to the position of Principal Scientist w.e.f 20.07.2012.
- Sh. V. K. Saharan, T-7-8 was promoted to the position of T-9/ Chief Tech. Officer w.e.f. 4.01.2011.

**Published by:** Dr. R.K. Gupta, Director, CIPHET, Ludhiana  
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