



**Central Institute of Post Harvest Engineering & Technology
Ludhiana
OUR SLOGAN: PRODUCE, PROCESS AND PROSPER**

**CIPHET E - Newsletter for March - June, 2013
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Director's Column

Dear All,

First of all, I render my regards to the CIPHET and post-harvest family on my joining as Director (Acting) of the Institute. I would make all my best efforts to make CIPHET a global institute in postharvest research and increase its visibility at International level as well. I will be trying to preserve high moral values and honesty. Stress is laid on the importance of planning for better execution and output.



Five days trainings sponsored by ATMA and NABARD on postharvest technologies for rural catchments for farmers from Maharashtra and Punjab were organized during the period.

To promote peace and harmony in the nation, Anti-Terrorism Day was observed. Staff of the Institute took oath to fight against terrorism and all kinds of violence on the occasion.

The ICAR's 18th All India Entrance Examination for admission to senior research fellow (PGS) and Undergraduate programme in Agriculture and allied sciences was conducted.

CIPHET licensed various technologies to different farmers and entrepreneurs.

Our colleague Dr. Deepak Raj Rai, Head Transfer of Technology Division took voluntary retirement and Dr. Sangeeta Chopra, Senior Scientist (Electrical Engg.) has joined DKMA, ICAR, New Delhi. CIPHET wishes them a great future ahead.

I congratulate my new colleagues who joined CIPHET family.

With best regards,

**S.N. Jha
Director (Acting)**

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Dr. S.N. Jha Joins as Director (Acting)

Dr. S. N. Jha, Head, Agriculture Structures and Environmental Control Division took over the charge of Director (Acting), CIPHET, Ludhiana on May 16, 2013. Dr. Jha, who has also received prestigious '*Rafi Ahmed Kidwai Award*' of Indian Council of Agricultural Research (ICAR) for his pioneering research work on non-destructive methods of food quality evaluation and post harvest technology, is an eminent scientist of international repute. Dr. S. N. Jha has developed number of technologies such as computation of maturity index and prediction of eating quality of mango, freshness index and overall quality index of *Brinjal* and *Apple* respectively, besides improved evaporative cooled storage structure and transport freight containers for fruits and vegetables. Dr. Jha said that he would make all best efforts to make CIPHET a global institute in post harvest research and increase its visibility. "We should preserve high moral values and honesty," he said, while advising the staff to be punctual and dedicated to work. He also laid stress on the importance of planning for better execution and output.

CIPHET Faculty Observed Anti-Terrorism Day



Notably, Anti-Terrorism Day is observed every year on May 21 to promote peace and harmony in the nation. Staff of CIPHET took oath to fight against terrorism and all kinds of violence on the occasion of Anti-Terrorist Day observed to mark the death anniversary of late Prime Minister Rajiv Gandhi. Director (Acting) CIPHET Dr. S.N Jha

urged the staff members to stand against terrorism and show national unity to eradicate this evil. He said that India is always known for its non-violence principles given by Mahatma Gandhi and all forms of violence should be condemned. Different organizations across the country conduct various seminars to create awareness about the danger caused by this unmerciful act of terrorism. The main aim of observing Anti-Terrorism Day is to wean away the Indian youth from anti-social forces threatening human lives.

Training program on Post-Harvest Technologies for Rural Catchments

CIPHET conducted a five day training programme on post-harvest technologies for rural catchments for 27 farmers from Ahmednagar, Maharashtra during March 4-8, 2013. It was sponsored by the Agriculture Technology Management Agency (ATMA), Ahmednagar. The training included agro-processing technologies of AICRP on Post Harvest Technology, production of green chilli powder and puree, marketing of agricultural produce, blending of meat



with vegetables for making value added products, soybean processing technology, ginger/garlic and onion dehydration technology, technology for storage of food crops, cattle feed from potato and processing and value addition technologies for oilseeds.

CIPHET conducted a training programme on Post-harvest technologies for rural catchments for farmers from Punjab during March 13-18, 2013. The programme was sponsored by NABARD under its Farmers Technology Transfer Fund (FTTF). During training programme participants were imparted training in agro-processing technologies from All India Coordinated Research Project on Post Harvest Technologies, production of green chilli powder and puree, marketing of agricultural produce, blending of meat with vegetables for making value added products, soybean processing technology, food quality and safety for income generation and value addition, application of plastics in agriculture, pulse processing, technology for storage of food crops, cattle feed from potato waste and modified atmosphere packaging etc. Appreciating the interest shown by large number of women in the training, Dr. U.S. Shivhare, Director, CIPHET said that customers are ready to pay price, if they are assured of the good quality. Dr. D. R. Rai, Head, Transfer of Technology Division said that trained women entrepreneurs could become ambassadors of the institute by imparting the techniques learnt from the institute. Mr. Nalin Rai, Deputy District Manager, NABARD delivered special lecture on various schemes of the government for funding small entrepreneurs.

Technologies Licensed

- CIPHET licensed beetroot powder technology on April 15, 2013 to Mr. Preetinder Singh, a Chandigarh based entrepreneur. A memorandum of understanding was signed for production of this product on commercial scale. Dr U.S. Shivhare, Director, CIPHET said that beetroot is rich source of carbohydrates, protein, dietary fibre and important vitamins. He added that technology has



lot of a potential and it would go a long way to provide effective and easy solution to people of all age groups. Dr. Mridula Devi, Senior Scientist at CIPHET, who has standardized the technology, said that in case of anaemia, beetroot increases the uptake of oxygen by as much as 400 percent. The entrepreneur said that people are becoming health conscious these days. He got adequate training from CIPHET for powdering technology of beetroot and he is already growing beetroot in his fields.

- CIPHET licensed the tomato processing technology to Mr. Amaranatha Reddy of Andhra Pradesh on March 13, 2013. He was also provided hands on training for making value added products of tomato. Handing over the copy of Memorandum of Understanding (MoU) to the farmer, Dr. P.R. Bhatnagar, Director (Officiating) said that number of value added products could be prepared from tomato and farmers/entrepreneurs could enhance their income manifold by processing them. Fresh tomatoes could not be stored for very long time and during the peak seasons they are sold at very cheap prices. Such losses could be prevented by processing them into various products.



- Technology of mechanized system for popping and decortications of *makhana* seeds was licensed on May 21, 2013 to a Ambala based entrepreneur M/s Jwala Engineering and Consultancy Services for commercial scale production and sale to entrepreneurs/farmers across the country. Dr S.N Jha, who has designed this machine, said that objective of this invention was to roast and pop the hot roasted, conditioned nut as well as decorticate the seeds without second roasting. “This would eventually reduce the drudgery and manual processing method and improve the quality of *makhana*,” he said, adding that so far no machine was available in the market and this machine is in high demand from states like Bihar, Assam, Madhya Pradesh. Dr. R. K. Viswakarma, Sr. Scientist, CIPHET at Abohar, was also associated with this development during final fabrication and testing. Notably, *Makhana* nut seeds which are grown in stagnant water bodies are scooped from the beneath of pond/ditches and are presently popped manually, which is time consuming and yields poor quality *makhana*. “I am quite impressed with working model developed by the CIPHET and have decided to get this technology for commercial scale production of these machines for the first time in India” said Mr. Gupta, who received the MoU “These would especially help farmers/entrepreneurs in *Makhana* growing states,” he said, adding that machine would be having capacity to 30 to 40 kilogram per hour.



ICAR Exams conducted

The ICAR's 18th All India Entrance Examination for admission to senior research fellow (PGS) was conducted on April 20, 2013 at Examination hall, Punjab Agricultural University,



Ludhiana. Eighty three candidates appeared in the examination to secure the prestigious fellowship awarded by Indian Council of Agricultural Research (ICAR), New Delhi for the doctoral studies in 14 disciplines of Agricultural and Veterinary science. Dr. U.S. Shivhare, Director, CIPHET was the nodal officer for this examination. Dr. M.R. Manikantan discharged the duty of Centre In-charge for this examination.

CIPHET also conducted 18th All India Entrance Examination for Undergraduate programme in Agriculture and allied sciences on 20.04.2013. One thousand eight hundred and fifty five candidates appeared in this examination. The examination was conducted at seven centers including Punjab Agricultural University; Kundan Vidya Mandir; and Bhartiya Vidya Mandir, Ludhiana.

Scientist Awarded

Dr. D.M. Kadam, Senior Scientist has made Institute proud by winning Mother Teresa Sadhavana Award-2013 for outstanding individual achievements and distinguished services to the nation from Global Achievers Foundation. He was awarded during the recently concluded function on Individual Contribution for Social and Economic Growth held at New Delhi. Dr. S.N. Jha, Director (Acting), CIPHET congratulated Dr. D.M. Kadam for getting this prestigious award and hoped that this would encourage the faculty to work with more dedication.



CIPHET to Evaluate Improvement in Lives of Poor Women using Gasifier Stove

Top Lit Updraft (TLUD) Gasifier stoves would be distributed to rural underprivileged women of Ludhiana district for providing them safe and eco-friendly cooking solution under the NABARD assisted project and improvement in their lives will be evaluated. This was revealed during the first Project Monitoring & Review Committee (PMRC) meeting held under the chairmanship of Dr. S.N. Jha, Director (Acting) at the Institute. Notably, TLUD gasifier is a smokeless stove with high fuel efficiency. Er. Prasoon Verma, Team leader of the project said “It could use variety of fuels including wood chips, agriculture waste, sawdust, charcoal, coal, dried leaves, rice/wheat husk etc.” He also added that rural women will also be benefited from health point of view due to smokeless operation of gasifier. Mr. Nalin Rai, District Development Manager, NABARD said that they would fund the entire project and these would be distributed to families of landless laborers. “This project is sanctioned to improve the condition of poor rural women as conventional stoves causes health hazards and also cannot use variety of biomass available in the rural areas,” he said. He informed that beneficiaries will be identified in ten villages through different Farmer’s Clubs of NABARD.

CIPHET trained farmer establishes turmeric processing unit

The training programme initiated by CIPHET for processing of *Haldi* (turmeric) has come to rescue of highly indebted farmers of Gurdaspur, who had lost lakhs of rupees after steep fall in prices of turmeric crops last year. Sh. Chanchal Singh, who got training from CIPHET, has established state-of-art haldi processing unit in his village *Lehal* of Gurdaspur with technical support of the institute. A team of experts headed by Dr D.M Kadam, Senior Scientist and Mr O.P Moondan, Technical Official visited the site of unit to provide him further technical



assistance. “Last year I had grown turmeric crop in more than 30 acres taken on rent and like me large number of farmers in Gurdaspur district invested in this crop inspired from high prices in year 2011,” said Chanchal, adding that in year 2012 prices suddenly fell to level of just Rs 5 per kg, which was around Rs 90 per kg (for seeds) a year before because of large number of farmers were rushing to get seeds expecting golden returns. Sh. Chanchal Singh, who retired as BSF Sub-

Inspector, said that it was very late when they realized that prices would fall drastically as large numbers of farmers were ready with the crop. “Supply exceeded demand many times,” he added. But still prices of the processed turmeric powder sold by leading brands remained constant, which made me to think to sell processed turmeric instead of raw crop.

After getting training from the CIPHET, he established this unit having capacity of more than 70 quintal per day. He has also come to rescue of large number of turmeric growing farmers by taking their crops for processing in Gurdaspur district. “I have paid them much higher than market price,” he added. Dr D.M. Kadam, Senior Scientist on visiting the newly established unit said that by processing raw crop, turmeric growing farmers could add value to the crop by more than two times. He added that Punjab farmers would also get benefit of saving transportation cost as processed turmeric powder usually comes from Southern states. Dr. Prasoon Verma, Incharge Head of Transfer of Technology, Division, said that they had initiated turmeric processing training to help farmers from distress sale. Dr. S.N. Jha, Director (Acting) CIPHET, said that it is a matter of great pleasure and pride that a grower trained at CIPHET has turned to be a processor, which is major aim of ICAR in 12th plan period under secondary Agriculture platform projects. He further added that farmers/entrepreneurs can contact the institute for various training programs to get benefit of value addition in post-harvest sector.

Conference/ Training Attended

- Dr. Manisha Mangal & Dr. Sangita Bansal, Sr. Scientist, FG&OP Division attended International conference on ‘Impact of technological tools on food security under global climatic scenario’ held at Shobhit University, Meerut during May11-12, 2013.
- Dr. D.M. Kadam attended training program at Directorate of Agribusiness Development, Tamil Nadu Agricultural University (TNAU), Coimbatore, conducted by ABI-ICRISAT, Hyderabad as a part of ICAR-NAIP initiative during June 18-21, 2013. This training programme was attended to get handhold for initiating the NAIP – Business Planning and Development (BPD) Unit at CIPHET, Ludhiana and ICRISAT, the NAIP approved new BPD’s.

Workshop Organized

To give hands on experience to school children about fruit and vegetable processing, one day workshop was organized at CIPHET, Abohar. The students were exposed to various technique of product development from fruit and vegetables. A visit to various laboratories was also arranged.



New Joining

- Ms. Monika, Scientist (Electronics and Instrumentation) joined CIPHET on 10.04.2013.
- Ms. Surya, Scientist (Agricultural Microbiology) joined CIPHET on 12.04.2013.

Retirement/ Transfer

- Dr. D. R. Rai, Head, Transfer of Technology Division was relieved from the ICAR services w.e.f. 20.04.2013.
- Dr. Sangeeta Chopra, Senior Scientist (Electrical Engg.), Transfer of Technology Division was transferred to DKMA, New Delhi w.e.f. 20.03.2013.

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