SECTORAL NEWS

₹500 Crore 'Operation Green' plan to stabilize onion, tomato and potato prices

The Central Government's 'Operation Green' is a scheme to avoid distress sale of surplus produce of tomato, potato, and onion (TOP) which aims for management of price instability of perishables like tomato, potato, and onion through farmers cluster based approach. Operation green is a pilot project for two years in which the centre will connect with farmer-clusters with the sellers and processors initially in 15 states. A corpus of Rs. 500 Crore is allotted for this scheme and it will be taken care of by Non-Banking Financial Company (NBFC) a financial institution. NBFC will cater to the credit and lending needs of the food processing sector.

Armed forces seeking supplements for soldiers in inhospitable terrain

The Indian Armed Forces are now looking at a broader basket of dietary supplements including functional foods, neutraceuticals and various other supplements. Research is on extensively to maximize the nutritional gain of soldiers deployed in the most inhospitable terrains. The advancements in food technology is being explored to mitigate the ill-effects of weather and terrain by the Indian Armed Forces.

Agro Processing Complex comes up at Sidhwan Belt

An agro-processing complex "Sukhwinder Agro Food Processing Model" has come up at Sodianwal village, near Sidhwan Belt, Tehsil Jagraon, District Ludhiana. Mr. S Sukhwinder Singh S/o S Gurmail Singh established the APC under technical guidance of All India Coordinated Research Project on Post Harvest Engineering and Technology, Punjab Agricultural University Center.

About the Publication:

ICAR-CIPHET News is an in-house quarterly publication of ICAR-Central Institute of Post Harvest Engineering and Technology aimed at brief compilation and highlighting of the activities/ information associated with different research, extension and HRD activities taken up by the scientists of the institute, AICRP (PHET), AICRP (PET) and KVK (ICAR-CIPHET), Abohar and also the information regarding other important activities of the institute.

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ICAR-CIPHET NEWS

PRODUCE PROCESS PROSPER

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FROM DIRECTOR'S DESK

I am extremely delighted to present the ICAR-CIPHET Quarterly Newsletter for July-September, 2018. The highest priority of the institute is to intensify research efforts which are need based and in direction of doubling farmers' income by reducing post-harvest losses and maximizing processing and value addition. With this objective we successfully conducted 28th Institute Research Council (IRC meeting) on 28-29 September, 2018 to review and discuss the R&D activities of the institute in which suggestions of ADG (PE), Dr. SN Jha and Dr. DC Joshi were very important. Few technologies including fish scaler hand tool, cabinet solar dryer, makhana chiki and low cost plywood storage structure for onion storage are some the technologies that have been developed and have the potential for enhancing income. I am extremely happy that a patent on "A New Process for Milling of Millets to Get Refined Powder" has been granted and externally funded projects have been earned by the institute during this quarter. Two ICAR sponsored summer schools, three EDPs were successfully conducted and sixty two farmers were trained.

Dr. RK Singh

RESEARCH HIGHLIGHTS

Development of hand-tools for fish descaling

-Armaan U Muzaddadi and Vikas Kumar

Primary processing of fish for product development or preparing fish-dishes has been a cumbersome process. In many fish markets, fish is primarily processed just before sale for which efficient and low-cost tools can help the fishers for fast retailing of fish. Fish is cut and dressed traditionally with knives, cutters and crude descaling tools. The present study has attempted to make a comparative study between the traditional tools and the ICAR-CIPHET developed fish descaling hand tools. Four species of carps with individual weight 250-750 g comprising of rohu (Labeo rohita), catla (Catla catla), big-head carp (Hypophthalmichthys nobilis) and common carp (Cyprinus carpio), with mean lengths 30 ±5.0 cm were used. Fishes were brought to the laboratory in live condition and processing was done immediately after slaughtering the fish to ensure uniform freshness. Same fish were also processed with the tools in the market by the expert fishers. Four tools namely T1 (traditional with steel spikes), T2 (with diamond shaped steel spikes), T3 (with plastic spikes) and T4 (with plastic and steel spikes) were tested (Fig. 1). The efficiency of the tools was expressed in terms of time (in second) required to descale (TD) a fish and percentage area cleaned (PAC) against the total skin area of fish. T2 and T4 showed promisingly better results in comparison to T1 (Fig. 2). T2 had TD of 12-15 second with PAC 91-96% and T4 had TD of 13-16 second with PAC 92-95% against the TD and PAC of the traditional crude tool (T1) which were about 20 second and 80-90% respectively (Fig. 3). However in context of injury to fish muscle and convenience of handling, T4 was preferred to T2 by the fishers.

Figure 1: Traditional descaling hand-tool (T1), Fish descaling hand-tool with diamond shaped spikes (T2), with plastic spikes (T3) and with both plastic and SS spikes (T4)

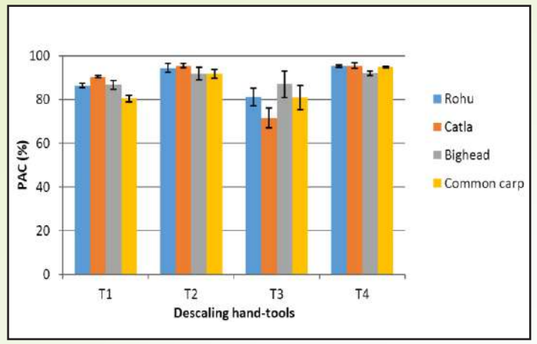


Figure 2. Percentage area cleaned (PAC) by using descaling Hand-tool with steel spikes (T1), diamond shaped steel spikes (T2), plastic spikes (T3) and plastic & steel spikes (T4) for rohu, catla, bighead and common carp.

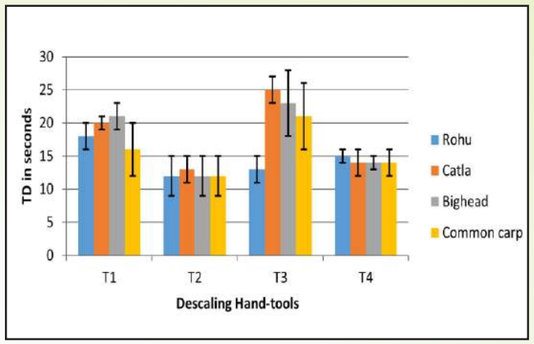
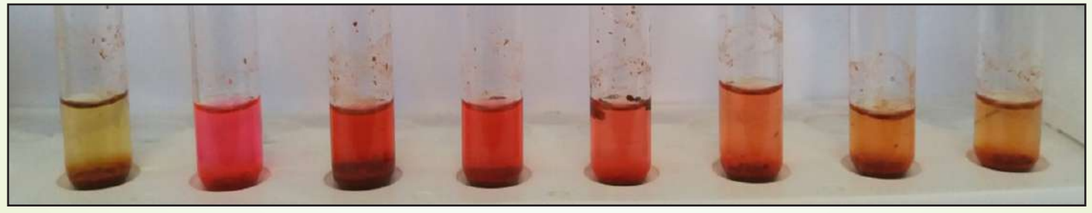


Figure 3. Time required to descale (TD) in seconds by using descaling Hand-tool with steel spikes (T1), diamond shaped steel spikes (T2), plastic spikes (T3) and plastic & steel spikes (T4) for rohu, catla, bighead and common carp.

Standardization of a modified process for detection of Rhodamine from red chilli powder

- Manju Bala

The FSSAI/BIS as well as earlier standardized method in our lab involve two-three steps. The method has been modified and rhodamine dye can be detected in one step. Appearance of red color shows test is positive for Rhodamine. Among the spiked chilli samples detection limit for rhodamine dye was observed to be 20-25 ppm with pink color and red color appeared at 50ppm.while in earlier test red color appeared at 1000ppm.



Pure Chilli	500ppm	200ppm	100ppm	75ppm	50ppm	25ppm	20ppm

Fig.1 Samples of chilli powder spiked with rhodamine (20-500ppm)

Thin layer drying kinetics of Maize cob

-Pankaj Kumar and Dhritiman Saha

Maize cob (with husk and without husk) was dried at three different temperatures (45, 55, 650C) using a convective tray dryer. Six thin layer mathematical models viz. Newton's, Page, Modified Page, Henderson & Pabis, Wang & Singh and Thompson were used in this study. The data obtained on moisture content (% w.b.) versus drying time were transformed into moisture ratio (MR). The curve fitting computations were carried out on all the six models. The values for root mean square error (RMSE) obtained for all models were in the acceptable range (0.0101-0.0480). Based on the coefficient of determination (R2) and RSME value, the Modified Page model was found to be the best model representing the maize cob (with and without husk) thin layer drying kinetics.

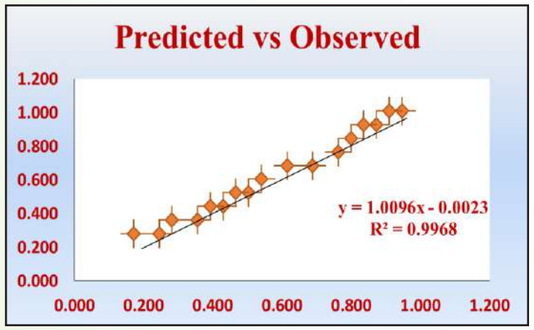


Fig 2. Predicted vs Observed MR (with husk)

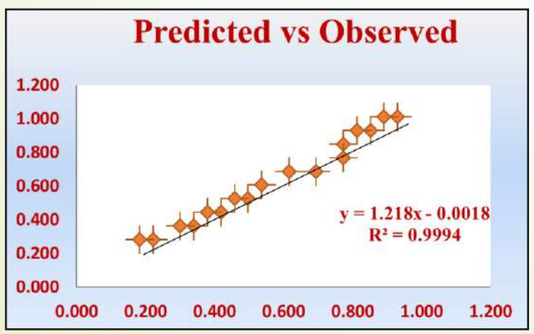


Fig 3. Predicted vs Observed MR (without husk)

Development of makhana chikki using over-popped-makhana

-Khwairakpam Bembem, R.K. Vishwakarma and Ranjeet Singh

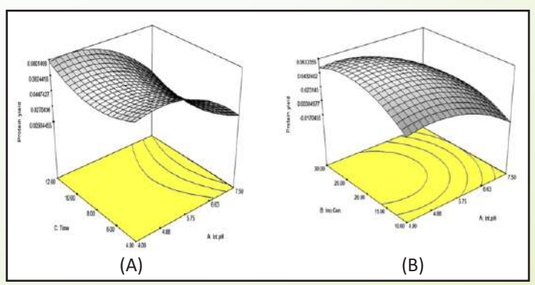
Makhana chikki was developed utilizing the over-poppedmakhana obtained from the popping of makhana. The chikki was made using jaggery, peanuts and makhana at the ratio of 50:25:25 (Fig.4). Organoleptic evaluation of makhana chikki for appearance, color, texture, flavor and overall acceptability scored 7.5- 7.9 on 9 point hedonic scale (Fig 4).

Figure 4 : Makhana Chikki from Over-popped makhana

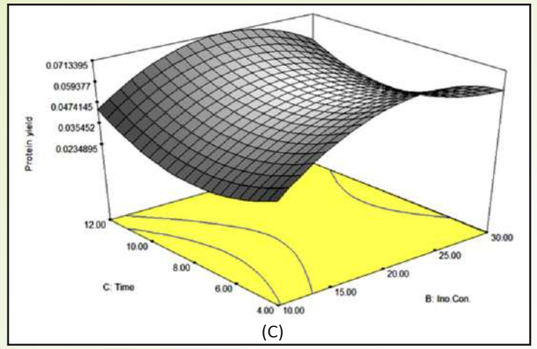
Optimized process for production of microbial protein using corn cob as substrate

-Surya Tushir, S.K.Tyagi, V.Chandrasekar

Screening of essential nutrientswasdone to optimize the media formulation.CCD design was used for standardization of growth medium conditions suitable for S. Cerevisiae using selected Enrichment media.Inoculum concentration, initialph and duration was standardizatied w.r.t to maximum culture biomass.The probabality value of the model less than 0.05 indicates that the model is significant at (p>0.05). The lack of fit value of model 0.022 is indicates the non signifcant ((p<0.05) of lack of fitnees of the model.



Effect of initial pH and time (A) and on Initial pH and inoculum concentration (B) on protein yield



(C)

Low-cost air modification system in plyboard storage structure for storage of onion

-Bhupendra M. Ghodki, Pankaj Kumar Kannaujia and Dukare Ajinath Shridhar

Low-cost air modification system for plyboard storage structure (3 × 3 × 3 m3) was developed which can humidify and dehumidify the storage atmosphere (Fig 5). The unit has two functional parts: (i) evaporative cooling cum humidification; (ii) dehumidification by gaur balls. The system was tested from June-Sept 2018 at HCP Division, Abohar for maintaining the storage environment of onions. The system is cable of lowering the storage temperature maximum by 7 °C simultaneously raising 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 and 5-6% dry basis moisture level were placed in three separate channels 0.32 × 0.32 × 0.05 m3 (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 the moisture content of 18% dry basis moisture level; 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.

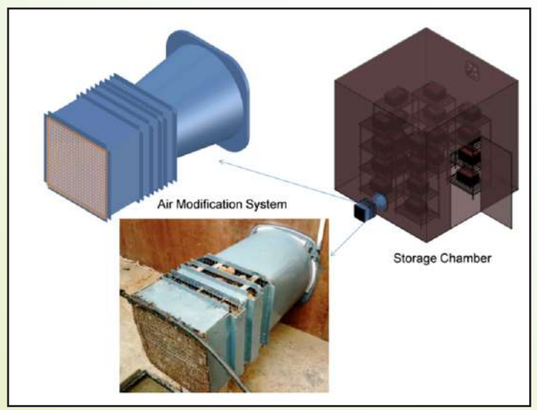


Figure 5: Low-cost air modification system

Development and performance evaluation of Bamboo Shoot Peeling machine

AICRP on Post Harvest Engineering Technology, CAU, Imphal centre developed a bamboo shoot peeling machine. The traditional method of bamboo shoot peeling may be replaced by this technology which is mechanically operated peeling machine (Fig. 6). It reduces drudgery / injury to the operator as well as increases the efficiency of peeling. It gives a peeling efficiency about 40-50 units of bamboo shoots per hour which is more than 50% compared to the traditional method. The Optimum speed of the spike shaft was 90 rpm which gave minimum defects/damage to the fresh bamboo shoots. This method has high potential and may be a promising enterprise for people of the region.

Figure 6: Bamboo shoot peeling machine

Value chain system of pineapple

AICRP on Post Harvest Engineering Technology, CAU, Imphal centre developed Value chain system of pineapple. Pineapples are among the major fruits abundantly available in Northeast Hill region of India particularly in Manipur, Tripura and Meghalaya. It is available for almost 8 months a year in Manipur. The present pineapple cultivated area in Manipur is about 10,000 hectares with an annual yield of 70,000 MT. AICRP on PHET, CAU, Imphalcentre developed value chain systems of pineapple for value addition of pineapple towards entrepreneurship development and income generation of the farmers of this region (Fig 7).

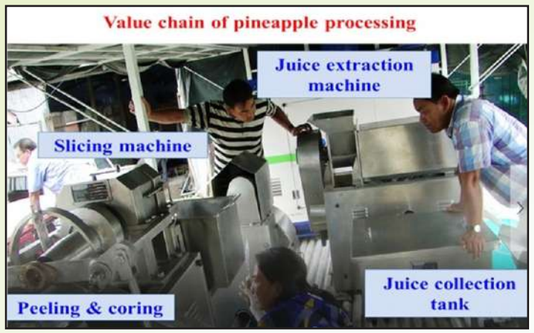


Figure 7: Value chain on pineapple

Solar cabinet dryer for Hills

AICRP on Plasticulture Engineering and Technology, VPKAS, Almora Center developed Solar Cabinet Dryer for Hills. It has Specifications: Overall dimensions of the developed dryer is 60×60×90 cm (Fig. 8). The capacity of dryer is 25-30 kg with lower operational cost because it is operated with solar powered exhaust fan to remove moistened air. It can be used to produce dried Green vegetables and medicinal plants. Its microclimate is modified as temperature inside solar cabinet drier rose by 11.4 °C, 24.6 °C, 33.2 °C, and 40.9 °C in basement, lower tray, middle tray and upper tray, respectively while the outside temperature was 26.0 °C. Drying was accomplished in 2-3 days to final moisture of 5-8 % W.B. The cost of dryer was Rs. 15000/-

Figure 8: Solar Cabinet Dryer for operation hilly region

PATENTS

Patent No. 299250, date of grant: 26.07.2018

A Patent on 'A New Process for Milling of Millets to Get Refined Powder' was granted to the institute under the team inventors Dr. RK Vishwakarma, Dr. SK Nanda and Dr. RT Patil. It is a process patent for milling of five minor millets namely proso millet (Panicum miliaceum L.), foxtail millet (Setaria italic L.), barnyard millet (Echinochloa crus-galli L.), little millet (Panicum miliare) and kodo millet (Paspalum scrobiculatum).

CELEBRATIONS

ICAR-CIPHET celebrated 72nd Independence Day in both the campus. Dr. RK Singh, Director (Acting), CIPHET hoisted the National Flag at Ludhiana and addressed the staff on the occasion in Ludhiana campus.

ICAR-CIPHET celebrated Haryali Teej festival on 2nd September, 2018 wherein women of all ages and kids participated in the cultural programme. On this day common dinner was also served in the Guest house for all the CIPHET family.

Janmasthami was celebrated in ICAR-CIPHET on 3-4th September, 2018 to celebrate the birth of Shri Krishna. In connection to this, Langar was also served

MEETINGS

Dr. R. K. Singh, Director CIPHET met all the staff of HCP Division, Abohar on 15th Sept 2018 and reviewed the R&D activities and the activities of Krishi Vigyan Kendra.

Twenty eighth Institute Research Council (IRC meeting) was held on 28-29 September, 2018 to review and discuss the R&D activities of the institute which was

blessed by the presence of our Hon'able ADG (PE), Dr. SN Jha and External Expert, Dr. DC Joshi, Former Dean, AAU, Anand, Gujarat.

ICAR-CIPHET KVK, Abohar conducted an Interaction Meet for Scientists and Farmers on IN-SITU Crop Residue Management in Village Kera Kherawas on 29th Aug, 2018, with 200 farmer participants.

ICAR-CIPHET KVK, Abohar conducted IN-SITU Crop Residue Management Scientist and Farmers Interaction Meet in Village Dharanghwalawas on 01st Sept, 2018. Dr. Rajbir Singh Director, ATARI, Zone 01, Ludhiana presided over the meeting.

EVENTS

Hindi Pakhwada, ICAR-CIPHET celebrated Hindi Pakhwada (Hindi Fortnight) by organizing many programmes and competitions during 14-28th September, 2018. All the staffs- scientific, technical and administrative participated the programmes enthusiastically. All the staff of HCP Division has organized and attended Hindi Pakhwada programme (14 to 28 Sept 2018) at ICAR-CIPHET, Abohar.

ICAR's All India Entrance Examination for Admission to UG, Masters' & Doctoral degree programmes and the award of National Talent Scholarship (NTS), PG Scholarship & NTS (PGS) and JRF/SRF(PGS) for the Academic Session 2018-19 was successfully conducted by ICAR-CIPHET, Ludhiana during 18-19 August, 2018.

ICAR-CIPHET KVK, Abohar organized live telecast programme on Interaction of SHGs and Women Groups Members with Hon'ble Prime Minister Shri Narendra ModiJi and Kisangosthi on 12th July 2018.

ICAR-CIPHET, Ludhiana and Abohar campus organized different cleaning activities during 18-22 September 2018 under the theme 'Swachhta Hi Seva'.

Hindi Sangoshti was organized on 1st September 2018 and Dr. Sunil Kumar, Principal scientist delivered a lecture on 'Importance of fiber in diet'.

EXTENSION ACTIVITIES

Awareness Programmes

ICAR-CIPHET KVK, Abohar organized an awareness program on World Breast Feeding Week on 6th Aug, 2018 at Killian wali village in collaboration with Child Development Officer (CDPO) Khuina Sarwar Block, Distt. Fazilka wherein 60 women participated in the programme. Another programme was conducted conducted on 8th Aug, 2018 at Saydanwali village with 80 women participants.

ICAR-CIPHET KVK, Abohar organized an awareness program on National Nutrition Week on 14-09-2018 in Govt. Sr. Sec. school Seed farm and Waheguru Agriculture College Burjmuhar of Abohar and students from class 8th to 12th were appraised through lectures, discussions, and questionaire.

ICAR-CIPHET KVK, Abohar organized a Farmers' Awareness programme in collaboration with KVK, Fazilka on 12-07-2018 which included farmer visit to machinery custom hiring center and talks and discussions. about 25 farmers participated and they also took a pledge to stop residue burning and also to work as ambassador for this noble cause.

ICAR-CIPHET KVK, Abohar organized one day IN-SITU

Crop Residue Management Awareness camp at Maya Devi Sr. Sec. School, Kera Khera on 25th August 2018, attended by 250 students and 60 teachers. Slogan banners on 14 school van/buses were pasted in this programme which might spread massages of not to burn of crop residue to wider area up to 14 different villages.

ICAR-CIPHET KVK, Abohar conducted one day IN-SITU Crop Residue Management Awareness camp at Govt. Model School Dharanghwalawas on 30th Aug, 2018 with 200 students and teachers participants and slogan banners on school wall were pasted in this programme. A pledge on "Not to burn paddy straw" was also taken on this occasion.

ICAR-CIPHET KVK, Abohar conducted IN-SITU Crop Residue Management Awareness camp at Guru Nanak Khalasa College, Abohar was conducted by Krishi Vigyan Kendra, ICAR-CIPHET on 05th Sept, 2018 with poster presentation and debate competitions. About 200 students and teachers participated and took a pledge not to burn paddy straw.

Training Programmes

ICAR-CIPHET KVK, Abohar organized a training progrommes in collaboration with KVK (Fazilka) for Agriculture Officers of District Fazilka under the project "In-Situ Crop Residue Management" on 04-07-2018 with 30 Agriculture Officers.

ICAR-CIPHET KVK, Abohar conducted 5 days Farmers' training on IN-SITU Crop Residue Management during 11-15th Sept, 2018 with 25 farmers from adopted village Dharanghwala and surrounding villages. Dr. RK Singh Director, ICAR-CIPHET, Ludhiana presided over the valedictory function of the training.

ICAR-CIPHET KVK, Abohar organized 7 Days Vocational training on Processing of Fruits & Vegetables during 10th to 16th July 2018 with 19 farmer participants.

ICAR-CIPHET KVK, Abohar conducted 05 Days Vocational training on Beekeeping during 09th to 13th July 2018 and 33 famers participated in this training.

FG&OP Division has organized an ICAR Sponsored Summer School on Advancements in post-harvest

management of legumes for minimizing losses and sustainable protein availability during July 05-25, 2018 at ICAR-CIPHET with Dr. Mridula Devi as course Director, Dr. R. K. Vishwakarma and Dr. PrernaNath as Course Co-directors.

TOT division has organized an ICAR Sponsored Summer School on Emerging Post-Harvest Engineering and Technological Interventions for Enhancing Farmer's Income during September 04-24, 2018 with Dr. Sandeep Mann as Course Director, Dr. Renu Balakrishnan and Er. Yogesh Kalnar as Course Co-directors.

An EDP was conducted on "Processing of Jamun" from July 09-11, 2018 under Consortium Research Project on Secondary Agriculture. Three participants attended the EDP and were benefitted with the knowledge of processing Jamun.

An EDP was conducted on "Processing of Tomato" from July 18-20, 2018 under Consortium Research Project on Secondary Agriculture. Four participants attended the EDP and were benefitted with the knowledge of processing tomato.

An EDP was organized on Meat processing was organized during 20-22 September, 2018 in AS&EC Division. Four participants attended the EDP and they were benefitted with novel meat processing and modern packaging techniques.

Transfer of Technology Division conducted a paid training on "Milling of Grains, Pulses & Spices" during 13-14 Sep, 2018.

Transfer of Technology Division conducted a training on "Post Harvest Management of Agricultural Produce" during 26-28 Sep, 2018 for 30 no. of farmers from Nashik, Maharashtra sponsored by ATMA, Nashik.

Shri Jaswant Singh receiving Certificate from Dr. Sandeep Mann on completion of training on Milling of Grains, Pulses & Spices.

Students' Training

Three months training programme is being organized for 06 nos. of B.Tech (Agril. Engg.) students form Centurion University of Technology & Management, Paralakhemundi, Odisha, during 1st August to 31st Oct. 2018 Participation in Exhibitions/ Melas.

In order to promote post harvest processing of agricultural produce among farmers for increasing their income, ICAR-CIPHET participated in KisanMela at PAU, Ludhiana opening a stall wherein prototypes of machineries, variety of products and process were displayed. Shri Lakhbir Singh, an entrepreneur from Rahon village, Punjab, who got trained in honey processing from the institute also sold his produce "Fresh Honey' during the mela.

KisanMela at PAU Campus, Ludhiana (20-22 September, 2018)

CAPACITY BUILDING

- Dr. A.U. Muzaddadi attended a hands-on training cum workshop on "RT-PCR" during 17-18 July, 2018 organized by Molecular Biology Unit, Institute of Medical Sciences, BHU, Varanasi.
- Dr. Sandeep Mann, Pr. Scientist & I/c Head TOT Division attended the training programme on Role of Technology in community level disaster mitigation from 20-24 August, 2018 at LBSNAA, Mussorie.
- Er. Chandan Solanki attended ICAR sponsored 21 days summer school on Soft computing tools for applications in food & agricultural processing held at ICAR-CIAE, Bhopal from August 01-21, 2018.
- Dr. Pankaj Kannaujia attended ICAR sponsored 21 days summer school on "Recent developments in organic vegetable production system under changing climate scenario" held at SKUAST, Srinagar from 24 July-13th August, 2018.
- Dr. PoonamChoudhary, Scientist attended 5 days training programme on "Laboratory Quality System Management and Internal Audit as per ISO/IEC 17025:2017 at National Institute of Plant Health Management, Hyderabad from July 23-27, 2018.
- Dr. Th. Bidyalakshmi Devi, Er. Navnath Indore and Er. Yogesh Kalnar attended a National workshop on "Artificial Intelligence (AI) in Agriculture: Status and Challenges" at NASC, New Delhi, held during July 30-31, 2018
- Dr. A.U. Muzaddadi, Principal Scientist represented ICAR as a member of joint team of ICAR and IFAD (International Fund for Agricultural Development) to collect information on the activities of the KVKs in selected districts of Assam from 6th Sep till 12th Sep, 2018 and Punjab on 28.08.2018 as part of the project design activity carried out by ICAR for its proposal entitled "Upscaling Renewable Energy Technologies for Empowering Smallholder Farming Families".

AWARD AND RECOGNITIONS

- Dr. Kirti Jalgaonkar received "Young Scientist" award by Venus International Foundation, Chennai in their 4th Annual Research Meet.
- Er. Dhritiman Saha was awarded with the Best Poster Award in International Conference held at IIFPT, Thanjavur during August 17-19, 2018.
- Dr. SakharamJagan Kale, Scientist, ICAR-CIPHET, Abohar campus, Punjab was awarded with Jawaharlal Nehru Award for outstanding Doctoral Research in Agriculture and Allied Sciences-2017 for Agricultural Engineering. He worked on "Parboiling of Pusa Basmati 1121 rice for higher retention of amylose content and process modelling using neural network". He established the optimum levels of soaking and steaming treatments for parboiling of PB1121 rice on the basis of amylose content. The information generated in the study would be useful to the basmati rice millers and consumers.
- Dr. K. Narsaiah, ICAR-National fellow was awarded Fellow of National Academy of Dairy Science, for his contribution to Dairy Science.
- Dr. Tanbir Ahmad, Scientist (SS) was awarded Ph. D. in Animal Sciences by Universiti Putra Malaysia (UPM) with ICAR-International Fellowship. The title of his thesis was "Improving gelatin extraction from hide using plant enzyme assisted process".
- Mrs. Deepika Goswami, Scientist SS (FST) was awarded Ph.D. in Food Technology in August 2018 by Punjab Agricultural University, Ludhiana, Punjab. The thesis title was "Processing, characterization and utilization of mustard meal as food ingredient".

VISITS

Sr No	Visitor Name & Address	No of visitors	Date of visit
1	College of Horticulture, UAS, Bengaluru-560065	4(S)+1(O)	07. 07.2018
2	Farmers from Pune, Maharashtra	6(F)	18.07.2018
3	Farmer from Mehta Chowk Tehsil Baba Bakala Amritsar	1(F)	02.08. 2018
4	Farmer fromSirmour, Distt. Rewa (M.P.) 486001	15(F)+ 1(O)	17.08. 2018
5	Farmer from Village ParnerDist-Ahmednagar, Maharashtra	14(F)+ 1(O)	18.08.2018
6	Tamil Nadu Agricultural University Agricultural College & Research Institute Madurai-625 104, Tamil Nadu	128 (S)+ 4(O)	04.09. 2018
7	Department of Food Processing Technology, Sri Guru Granth Sahib World University, Fatehgarh Sahib, Punjab	30(S)+2(O)	07.09. 2018
8	School of Agriculture, Lovely Professional University Jalandhar-Delhi G.T. Road (NH-1), Phagwara (Punjab)	104(S)+1(O)	14.09.2018
9	School of Agriculture, Lovely Professional University, Jalandhar - Delhi G.T. Road,NH-1, Phagwara-144411, Punjab	35 (O)	15.09.2018
10	Mr. Vishal Dhiwan, Project Cordinator, Agriculture Himmotthan Society, Dehradun and his team	4 (O)	19.09.2018

PUBLICATIONS

Publications in Scientific Journals

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Technical Bulletins/ Reports/ Compendium/ Manual

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- Compendium on Meat Processing and Value Addition. EDP during 20-22 September, 2018 (Eds. Yogesh Kumar, Akhoon Asrar)

PERSONALIA

- Dr. R.K. Gupta, former Director, ICAR-CIPHET left on 1st July 2018 to join as Director, Mahatma Gandhi Institute for Rural Industrialization, Maganwadi, Wardha, Maharashtra - 442 001, India.
- Dr. S.K. Nanda, former PC, AICRP (PHET) and Head, FG&OP Division, ICAR-CIPHET superannuated on 31st October 2017.
- Dr. E. Nambi, Scientst was selected for the post of PC, Krishi Vigyan Kendra
- Gandhigram Rural Institute, Gandhigram - 624 302, Dindigul District, Tamil Nadu.
- Mrs. P. Hemasankari, Sr. Scientist was transferred from CMFRI, Cochin to ICAR-CIPHET. She joined in FG&OP Division, ICAR-CIPHET, Ludhiana.
- Dr. Bhupendra M Ghodki, joined as Scientist in HCP, Division Abohar.
- Dr. Thingujam Bidyalakshmi Devi, joined as Scientist in AS&EC, Division ICAR-CIPHET, Ludhiana.
- Smt. Poonam joined as Scientist in AS&EC, Division ICAR-CIPHET, Ludhiana.
- Er. Dawange Sandeep Papatrao, , joined as Scientist in TOT, Division ICAR-CIPHET, Ludhiana.
- Mrs. Pragya Singh joined as Technical Assistant (Field Farm)

TITBIT

Cabbage, broccoli prevent colon cancer

The scientists of Francis Creek Institute published their findings in the journal 'Immunity' that Indole-3-carbinol, produced by the vegetables including cabbage, broccoli and kale (under genus Brassica) produces a protein called aryl hydrocarbon receptor (AhR) in our body. This AhR works as a environment sensor in the big intestine and they send impulses to the immune and epithelial cells of the big intestine which in turn protects the intestine against action of millions of resident bacteria of intestine.

A compound from coconut oil works better than insect repellents

A team of scientists led by Junwei Zhu published their findings in the journal Scientific Reports that specific coconut oil fatty acids have strong repellency and long-lasting effectiveness against multiple insects-mosquitoes, ticks, biting flies and bed bugs which can transmit diseases to humans and animals. The free fatty acid mixture- lauric acid, capric acid and caprylic acid as well as their corresponding methyl esters provides strong repellency against blood-sucking insects. This compound works better than DEET (chemical name, N,N-diethyl-meta-toluamide) which has been treated as gold standard in insect repellents as the most effective, long-lasting commercially available insect repellent.