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Cover page: Guest House with *Tiranga*,
Open Gym & Badminton Court

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From the Director's Desk

First of all, I would like to congratulate all the scientific, administrative and supporting staff of ICAR-CIPHET, Ludhiana for a successful completion of the FY 2022-23. We added myriads of items to the assets of the institute during last financial year. Few of them are the Tiranga fixed at height of 67 feet on the top of Guest House building; we added the shaded car parking area in the campus; and the open gym near the water tank, moreover we renovated Type 3 quarters. These will surely add value to the campus. Other than these, our institute got a few numbers of externally funded projects of multi-crore budget in the last financial year. Some research achievement of this period a sensor-based system for monitoring the environmental conditions of banana cultivation and a process that improves head rice recovery from long grain paddy. We also developed the Millet Processing Centre and Storage-Pests Management Laboratory in the institute.



Under the AICRP-PHET, a dehumidification unit and pneumatic aspirator were innovated to streamline the conveyance of granular jaggery in modern jaggery plants. Additionally, significant strides were made, including the development of a vacuum-assisted ohmic heating system and an essential oil release kit for insect control in pulses. We obtained a patent for a Mechanized System designed for popping and decortications of Makhana seeds, the technology we consider as one of our major innovations.

In the technology transfer domain, ICAR-CIPHET successfully disseminated the knowledge for producing groundnut-based flavored beverages, curd, and paneer to two firms. Moreover, collaborative agreements were signed with two industries and two universities through signing of Memoranda of Understanding (MoUs). With participations in many workshops and seminars, scientists also published good number research and popular articles. While we celebrate these achievements, it is essential to maintain our steadfast commitment to developing farmer-friendly technologies and producing impactful research articles in the future.

I wish that this institute will progress with fresh enthusiasm and zeal in the current financial year too and the scientists will achieve new milestones in the research and development.

Ludhiana, 13 August 2023

(Nachiket Kotwaliwale)
Director, ICAR-CIPHET

RESEARCH HIGHLIGHTS

Development of a sensor-based system for tracking the environmental conditions of banana

Under ICAR-NePPA project sensor-based system is being developed for tracking the environmental conditions of banana while being transported from farm to market. The prototype has been modified for the integration of the ethylene sensor. The website has also been developed for monitoring environmental parameters (as recorded by the sensor-based system) as well as other related data (Farmers' details, storage and transportation details, etc).



Modified prototype of the sensor-based system (Cluster node in left and sensor node in right)



Website template for tracking of sensor and other data

Standardized process for improved head rice recovery from long-grain paddy

Basmati and long-grain rice varieties are more prone to breakage due to their longer length as compared to other rice varieties. In order to minimize the breakage of rice during milling, the paddy is subjected to a process known as parboiling (soaked, steamed, and dried) before milling. Different parboiling methods have been used by rice millers as per their use; however, based on scientific observations, methods need to be standardized for the same. Various steps (soaking, steaming, and drying) of the parboiling process have been standardized to achieve higher head rice recovery without compromising the quality of milled rice. The standardized conditions are soaking at 65°C for 4h and steaming at 1.0kg/cm² for 5 minutes followed by shade drying. The head rice recovery was 62% at standardized conditions. There is a significant increase in equilibrium moisture content upon soaking in the case of parboiled rice; however, pasting viscosities and relative crystallinity show a decline in the case of parboiled rice in comparison to raw rice as expected. The equilibrium moisture content varied from 44.16% in the native sample to 86% in parboiled rice. The starch crystallinity of raw rice reduced from 33.87% to 12.64% after steaming.

AICRP on PHET

Dehumidification unit and pneumatic aspirator for the conveyance of granular jaggery in modern jaggery plant (Anakapalle centre)

The dehumidification unit to remove moisture from granular jaggery of 100kg/h and the pneumatic aspirator has been designed for the conveyance of dried granular jaggery to the bagging unit. Both units are installed in the modern jaggery plant established at Anakapalle. The dehumidifier consists of a chilled cater unit (3 TR) and chilling coils and electrical heating coils to produce cool air of 20°C and 40% RH. The unit consists of FINNED-type coils for cooling air by chilled water and a 500 l insulated tank for chilled water and a 1 hp water pump to circulate chilled water. Also, the unit consists of FINNED-type coils for heating by hot water or steam condensate. The heating coils have been provided with a supporting frame with conveying air inlet and a flap valve for adjustment of airflow in the conveyance system.



Dehumidifier for removal of moisture from granular jaggery

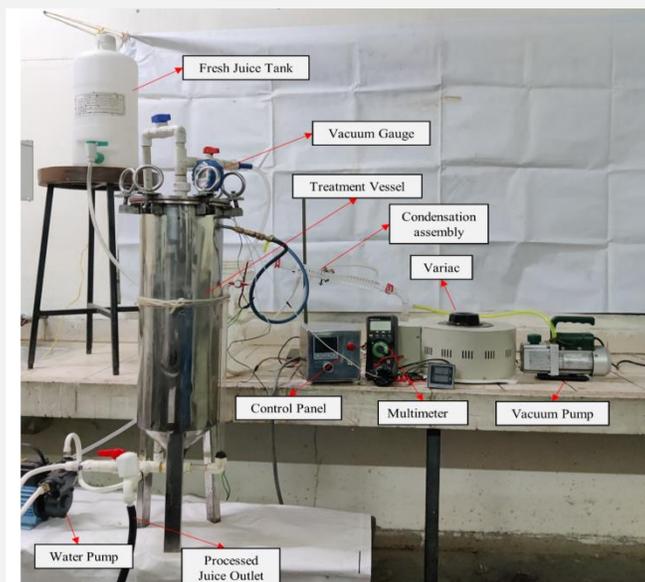


Pneumatic aspiration system for conveyance of granular jaggery

Vacuum-assisted ohmic heating system (PAU, Ludhiana)

Even though recent non-thermal advances have been made for the concentration of juices, evaporation continues to be the most widely used method. Ohmic heating has numerous advantages over conventional evaporation methods since the heat is generated volumetrically and dissipated directly into the food matrix which avoids the surface contact to transfer the heat. A vacuum-assisted ohmic heating system of 3 l capacity for pasteurization and concentration of juices has been developed. The main components are electrodes, a vacuum chamber, an electric control box, a variable transformer, fresh and concentrated juice tanks, a vacuum pump, piping and pumping systems, and condensation assembly. The developed system was evaluated at different input voltage gradients (7.5 to 12.5 V/cm) based on the system performance coefficient, variations in electrical conductivity, V-I characteristics, and heating rate of treated juice. The system was evaluated for amla juice for the changes in electrical conductivity (EC) which varied between 0.18 to 0.33 S/m, system performance coefficient (SPC) (0.81 to 0.90), heating rates (0.7 to 3.08°C/min) and V-I characteristics of the amla juice. The system provided a rapid heating for

amla juice suggesting that it can be used effectively for the concentration of juices.



Vacuum-assisted ohmic heating system

Essential oil release kit to control insects in pulses (PAU, Ludhiana)

A low-cost ready-to-use kit was designed for its application for retail packets as well as household-level metallic drum storage to manage major storage insect pests of chickpeas. Prior to storage bring the moisture content (% wet basis) of the chickpea at 10% if to be stored for 6-12 months and 8%, if to be stored for more than a year. If thermal treatment (60°C in a hot air oven) is given to the chickpeas for an hour, then 50 l of garlic essential oil (EO) is to be applied on the strip (5cm x 1cm) per 500 g capacity retail packet or container used to store chickpea.

The dose may be increased or decreased according to the capacity of the storage unit. Check the stored chickpea at regular intervals to avoid any kind of infestation caused by storage insects in between storage periods. Once the drum will be opened then we have to re-apply the EO or check them at regular intervals to avoid any kind of insect infestation till EO will be re-applied. EO may be repeated as and when required.



Essential oil release kit

Technology for processing of coconut *neera* to enhance the shelf life (TNAU, Coimbatore)

The effect of ultrasonication on the quality parameters of coconut inflorescence sap was evaluated in order to prevent the fermentation of sap. Fresh sap was collected and treated with ultrasound (amplitude in the range of 40 to 60% with exposure times of 1 to 10 minutes at a constant frequency of 20 kHz). The optimum condition for the ultrasound process was identified at an amplitude of 60% and a treatment time of 5 minutes which had a significant effect at 5% level on the biochemical properties of sap. Hence, ultrasound was found to be a good alternative to conventional thermal treatments for maintaining the quality of fresh sap. The treated samples were subjected to shelf-life studies under cold storage ($4\pm 1^{\circ}\text{C}$) and ambient storage ($28\pm 2^{\circ}\text{C}$) conditions for 15 days. The microbial load increased with an increase in storage days and rapid growth was observed after 15 days of refrigerated storage while the *neera* stored at ambient conditions spoiled after 3 days.



Ultrasound treated *neera*

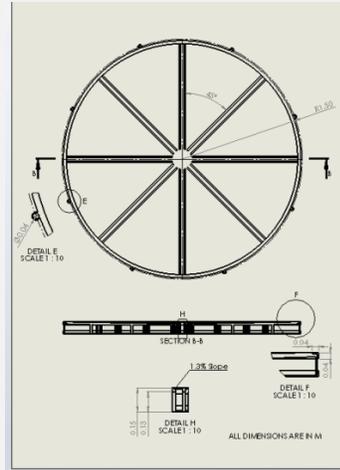


Control

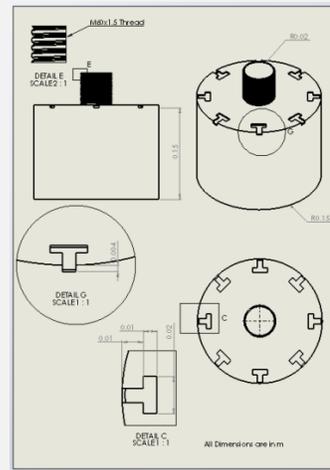
AICRP on PEASEM

Development of user-friendly biofloc fish rearing facility (CIFA, Bhubaneswar)

A biofloc fish rearing facility has been designed with an objective for optimum utilization of fish waste. The facility is designed to incorporate fish rearing tank, mechanical settler and bioreactor. It is $\text{Ø}3 \times 1.2$ m cylindrical PVC coated polyester lining surrounded by rigid plastic mesh (25 mm). The lining and the mesh are supported on 8 portable FRP sectors of 3.2 m dia. with vertical support columns at the end. The new design is done incorporating a modular base structure to be made out of 48 mm MS angles. The interlocking base platform is designed to give the fish tank a sturdy foundation on uneven land. A center hub has been fabricated for attaching the 8 FRP sectors with cam latch mechanism. A 50.8 mm PVC drain pipe at the bottom centre is designed to be coupled with the center hub. The biofloc fish rearing tank of 8000 l capacity has been tested at the ICAR-CIFA farm site and the modular base design has been proven to be suitable for the operational capacity of the biofloc tank. The hydrostatic loading and flow dynamics of the tank bottom was in line with the simulation data.



MS base



Center locking hub

Elevated Plastic Slatted Floor Technology for goat shelter in semi-arid region of Uttar Pradesh (CIRG, Makhdoom)

To overcome the disadvantages of conventional slatted floor using bamboo and wood, the raised plastic floor at 6'' height from floor as bedding materials and 3.75' from floor as floor materials were tested using available goat breeds at different physiological stages to study its effect on growth, milk yield, cleanliness, worm load and manpower saving at Experimental farm of Institute through different trials. The comparison of plastic slatted floor as bedding material with rubber mats and soil floor revealed similar growth and feed conversion efficiency in kids, however, the kids were more clean on plastic bedding as per cleanliness score. Similarly the comparison of plastic slatted floor with soil floor as floor materials revealed similar growth in both kids and lambs, however, the plastic slatted floor significantly reduced worm load in growing kids and lambs and reduces manpower required for daily cleaning hence equates higher initial cost over long run in commercial goat farms. Therefore, it can be inferred that plastic slatted floor technology shall be easily recommended for construction of small ruminant shelters with raised floor in semi-arid regions of India without compromising growth performance and comfort level in stall-fed rearing system.



Plastic Slatted floor as bedding materials



Soil floor



Rubber mat floor



Wooden Slatted floor as flooring materials

FACILITIES CREATED

Millet Processing Centre (MPC) at ICAR-CIPHET, Ludhiana

ICAR-CIPHET, Ludhiana, has created complete processing facilities for custom hiring for all millets. The MPC consists of a destoner (100 kg/h), a specific gravity separator (100 kg/h) along with four types of dehullers adopted/ developed by ICAR-CIPHET, Ludhiana. Abrasive type dehuller (100 kg/h) especially developed for buckwheat can be used for easy-to-dehull type millets viz., Little, Foxtail, Proso, and Buckwheat pseudo millet. However, centrifugal type dehuller (100 kg/h) especially developed for oats can be used for difficult-to-dehull type millets viz., Barnyard and Brown top. Machinery like cleaner cum grader with an aspirator (100 kg/h), and roller type dehuller (500 kg/h) for dehulling and pearling of major millets viz., finger, pearl, and sorghum are installed. Rubber roll type dehuller (500 kg/h) for difficult-to-dehull millets especially Kodo millet, Barnyard, and Brown top millet are also installed in this centre.



Model MPC established at ICAR-CIPHET, Ludhiana

Storage-Pests Management Laboratory at ICAR- CIPHET, Ludhiana

A state-of-art facility was created in the institute as the “Storage-Pests Management Laboratory”. The lab is equipped with scientific equipment for conducting research in storage entomology.



PUBLICATIONS

Research Papers

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- Samota MK, Kaur M, Sharma M, Krishnan V, Thakur J, Rawat M, Phogat B and Guru PN (2023). Hesperidin from citrus peel waste: extraction and its health implications. *Quality Assurance and Safety of Crops & Foods*, 15(2), 71-99.

Book

- Muzaddadi AU and Mandal SC (2023). Aquarium Construction, keeping and maintenance. Narendra Publishing House, New Delhi [ISBN: 978-93-56511-67-5] p- 209.

Book Chapter

- Vyas P, Rana AK and Kasana RC (2023). Role of plant growth-promoting bacteria in rainfed and irrigated crops. In Ritu Mawar et al (eds.) Plant Growth Promoting Microorganisms of Arid Region, Springer, pp 45-69.

Training Manual

- Balakrishnan R, Kumar V and Bembem K (2023). Post-harvest technologies for promoting agro-processing (For ATARI Zone- VI). Training organized by, ICAR-Central Institute of Post-Harvest and Technology during 16-18 May, 2023, at ICAR-CIPHET, Ludhiana, Punjab.
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- Solanki C, Goswami D, Atbhaiya Y and Sharma N (2023). Training manual on Skill Development Training on Primary Processing and Value Addition of Millets under SCSP scheme (GoI), ICAR-Central Institute of Post-Harvest Engineering and Technology, Ludhiana, Punjab (India), pp 1 - 112.
- ख्वाइराकपम बेमबेम, संदीप पोपटराव दवंगे (2023). कृषि उत्पादों का फसलोत्तर प्रबंधन. किसान प्रशिक्षण पुस्तिका. 5-9 जून 2023. भाकृअनुप- केंद्रीय कटाई- उपरांत अभियांत्रिकी एवं प्रौद्योगिकी संस्थान, लुधियाना, पंजाब. पृष्ठसंख्या 130.

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- Kotwaliwale N, Mann S, Balakrishnan B and Guru PN (2023). Vision 2047. ICAR-Central Institute of Post-Harvest Engineering and Technology, Ludhiana. pp. 40.

Popular Articles

- चन्दन सोलंकी, स्वाति सेठी, दीपिका गोस्वामी और मंजू बाला (2023). कटाई उपरान्त श्रीअन्न का प्रसंस्करण एवं मूल्यवर्धन। हरीतकी पोषणाहार- स्वास्थ्य का आधार स्मारिका, उत्तर क्षेत्र सुपोषण एवं श्रीअन्न कार्यशाला, पृष्ठ 26-28, लुधियाना, पंजाब 23 अप्रैल 2023. आरोग्य भारती, पंजाब ।

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EVENTS/ACTIVITIES

- Quinquennial Review Team (QRT) second meeting was organized at ICAR-CIPHET, Ludhiana and Regional Station, Abohar during 13-15 April, 2023.



- “World Intellectual Property Day” was celebrated at ICAR-CIPHET Ludhiana in collaboration with ICAR-IIMR, Ludhiana with the theme of Women and IP: Accelerating Innovation and Creativity on 26 April, 2023 in hybrid mode. This event was celebrated through Institute Management Unit (ITMU) and Agri-Business Incubation Centre (ABIC) by conducting an awareness program on Intellectual Property Rights. The program was celebrated with priority to women scientist and women IP experts for sharing their knowledge and experience as per the theme of World IP Day-2023.



- **Inauguration of Regional Station, Abohar by Dr. S.N Jha, Hon’ble DDG Agricultural Engg.**
The Regional Station of ICAR-CIPHET was inaugurated at Abohar, Fazilka district of Punjab on 28th June 2023 by Dr. S.N Jha, Hon’ble DDG Agricultural Engineering. Earlier this station was the Horticultural Crop Processing Division of ICAR-CIPHET. This division was declared as Regional Station of ICAR-CIPHET with effect from 24th January 2023 by the Council Order dated 27th January 2023. A stakeholder meeting was also organized on the occasion of inauguration of the

centre. The chief guest of the meeting was Dr. SN Jha, DDG Agri Engg., ICAR, New Delhi and special guest was Dr. Nachiket Kotwaliwale, Director CIPHET, Ludhiana and Dr. Anil Sangwan, Director, PAU Regional Center, Abohar and Dr. Anil Kamra. In this meeting, 26 participants i.e., entrepreneurs and progressive farmers and women of self-help groups associated with CIPHET Abohar and *Krishi Vigyan Kendra* participated.



- International Day of Yoga-2023 was jointly celebrated by ICAR-CIPHET Ludhiana and Abohar, ICAR- ATARI Zone-1, Ludhiana, ICAR-NRC on *Makhana*, Darbhanga and *Yog Bharti*, Ludhiana on 21 June, 2023 in hybrid mode. Total 150 participants with 20 participants participated through online mode.



- 06 अप्रैल, 2023 को 'राजभाषा हिंदी की तिमाही कार्यशाला' का आयोजन किया गया जिसमें संस्थान के सभी वैज्ञानिक और प्रशासनिक कर्मचारियों ने भाग लिया।

EXTENSION ACTIVITIES

Trainings

Training programme	Participants	Duration
Officers Trainings		
Capacity building of Agricultural Extension Professionals for promoting agro-processing	8	16-14 May, 2023
Value chain management of agricultural commodities for income enhancement of stakeholders (Online collaborative training programme with MANAGE)	35	14-16 June, 2023
Student Trainings		
Research Training on Microencapsulation, Dr. NTR college of Agril. Engg., Acharya N. G. Ranga Agricultural University	1	10 April - 9 May, 2023
Introduction to Post-harvest Technologies for Agricultural Produce	34	1-30 June, 2023
Introduction to Post-harvest Technologies for Agricultural Produce	6	18 May-30 June, 2023
Farmers Trainings		
Post-Harvest Management of Agricultural Produce, DIU, SMART Project, Amravati, Maharashtra	14	10-14 April, 2023
Post-Harvest Management of Agricultural Produce, Wardha ATMA, Maharashtra	19	15-19 May, 2023
Post-Harvest Management of Agricultural Produce, Dhule ATMA, Maharashtra	20	5-9 June, 2023

Technology Demonstrations/ FLDs/ OFTs

S. No.	Technologies	Date	Occasion
1.	Cryogenic Grinding	25 April, 2023	Training of B. Tech students from PIT, Parul University, Vadodara during 10 April – 9 May, 2023
2.	Spray Drying		
3.	Extrusion Technology	26 April, 2023	
4.	Cryogenic Grinding	May-June, 2023	Demonstration to 34 students of B.Tech (Agril. Engg.) from 6 different Colleges of universities.
5.	Spray Drying		
6.	Extrusion Technology		
7.	Supercritical Fluid Extraction		
8.	Oil Milling Expeller and Millet Milling Plant		
9.	Extrusion Technology		
10.	Safe Storage Methods of Agriculture Produce		
11.	Primary Processing of Millets		

Visits

S. No.	College/Institute	No of visitors	Date of visit
1.	Officers from Department of Agriculture and Farmers' Welfare facilitated by PAMETI	14 (O)	18 May, 2023
2.	APEX Agriculture College Chaiya, Rawatsa, Rajasthan	30 (S)	25 May, 2023
3.	ICAR-Indian Institute of Wheat and Barley Research, Karnal (HR)	1 (O)	9 June, 2023

*S-Students, O-Officials

Awareness programmes

S. No.	Programme Title	Venue	Duration	Number of beneficiaries
1.	Post-harvest Technologies (CIPHET) and Value Addition of Millets and Pulses-based Products.	Village Jainpur, Ludhiana	9 May, 2023	15
2.	<i>Mera Gaon Mera Gaurav</i>	Village Jainpur, Ludhiana	18 May, 2023	15
3.	Role of Physiotherapy on Women Health	ICAR-CIPHET, Ludhiana	30 May, 2023	50
4.	World Environment Day	ICAR-CIPHET, Abohar	5 June, 2023	40



- Industry interface meeting cum awareness camp in collaboration with NHB**
 An industry interface meeting cum awareness camp for horticultural crop production and processing was organized at ICAR-CIPHET, Abohar in collaboration with National Horticulture Board Chandigarh on dated 14 June, 2023.



Activities under Farmers' First Project (FFP)

Creation of a Farmer-Interest Group and Empowering them with Honey Processing Unit

A farmer-interest group of 20 beekeepers from the village Bandi, Bathinda, Punjab has been created by the FFP team. They approached ICAR-CIPHET for technical guidance and support on honey processing. The FFP team provided hands-on training on modern honey processing and packaging and guided them on the marketing of processed honey in the retail/wholesale market. An MoU has also been signed between ICAR-CIPHET and bee-keeper Mr. Jasveer Singh from Bathinda, Punjab on 6 April, 2023, and handed over the honey processing unit (capacity: 25-30 kg/batch).



Capacity building of horticultural farmers and distribution of cling wrapping machine

The FFP team conducted a meeting with the horticultural farmers of village Ghagga, Patiala and discussed on-farm handling techniques for fruit and vegetables, requirements for the establishment of packhouse, and minimal processing of horticultural crops. The team also gave a live demonstration of cling-wrapping machines for retail packaging of vegetables (cauliflower, peas, mushroom, and capsicum). The farmers were also shown different types of flexible and rigid packaging materials for the packaging of various types of horticultural crops. The team also

encouraged the farmers to start the sale of packed vegetables in the retail market rather than to traders in bulk quantities. The project team also handed over two cling-wrapping machines to farmers so that they can start their sale of packaged vegetables in the market.



Monitoring

The FFP Team conducted a meeting with beekeepers of village Bandi, Bathinda, and monitored the progress of the honey processing unit established under the project. The team discussed with beekeepers about honey production practices, migration of bee boxes, problems faced by beekeepers, traditional honey processing techniques, market demand, packaging, and labelling of honey. The FFP team also encouraged them to use the unit as a custom processing centre. The team also guided the beekeeper (Mr. Jasvir Singh) on FSSAI registration for branding and labelling of honey to enable retail marketing that will enhance their income and profit margins.



KVK ACTIVITIES

Training

S. No.	Training programme	Participants	Duration
1.	Student training on Rural Agricultural Work Experience and Industrial Attachment	1	1 Feb- 7 April, 2023
2.	Improved Techniques of Summer Vegetables Production	13	12 April, 2023
3.	Soil and Nutrient Management in Kharif Crops	18	11 May, 2023
4.	Package of Practices for Millets Cultivation	10	12 May, 2023
5.	Preparation of <i>Poshtic Dalia</i> under OFT	19	30 May, 2023
6.	Summer Training of B. tech. Students from College of Agricultural Engineering and Technology, CCSHAU, Hisar	3	1-30 June, 2023

Demonstrations

- Demonstration of natural farming of mustard crop was done on an area of 350 sq.m. Seeds were treated with *beejamrit* (cow dung 5 kg, cow urine 5 l, lime 50 g, live forest soil 50 g and water 20 l and *jeevamrit* (jaggary 2 kg, cow dung 10 kg, cow urine 10 l, *dal* flour 2 kg, live forest soil 1 kg and water 200 l) was used as soil and foliar application. *Jeevamrit* applied thrice through irrigation water and twice through foliar application was sufficient to record an average yield of 20 Q/ha in Abohar region.



OTHER ACTIVITIES

Technical Consultancy and visits

- Dr. Swati Sethi, Dr. Poonam and Er. Thongam Sunita provided consultancy technical assistance on the functionality of equipment present in the labs at different locations of Chhattisgarh State Minor Forest Produce Co-Operative Federation Ltd., Raipur Chhattisgarh, and technical assistance on the processing of jamun chips and squash and ragi biscuits during 28 May-2 June, 2023.
- Dr. R. K. Vishwakarma and Dr. Guru P. N. visited the National Research Centre for *Makhana*, Darbhanga; M/s Mithila Naturals, M/s Agrofarm Solutions Pvt. Ltd., Saharsa, Bihar during 11-14 June, 2023.

Participation in Trainings/Workshops

S.no.	Staff Name	Title of the Programme	Dates
1.	Dr. Dhritiman Saha and Dr. Sandeep P. Dawange	DGCA-approved Remote pilot Course and Agriculture Drone Operator Training conducted by Drone Destination, Gurugram	29 Mar – 2 April, 2023
2.	Dr. Leena Kumari	Installation cum Demonstration Training of Sigmascan Pro Software under NePPA Project	18 May, 2023
3.	Dr. Dhritiman Saha		
4.	Er. Sunita Thongam		
5.	Er. Shaghaf Kaukab	4 th Indian Workshop on Applied Deep Learning organized by BITS Pilani, Goa & ICAR-IASRI, New Delhi	12-16 June, 2023
6.	Er. Sunita Thongam		
7.	Dr. AU Muzaddadi	MDP on Leadership Development (a Pre-RMP Programme) organized by ICAR-NAARM, Hyderabad	12-23 June, 2023

Participation in Conferences

Name of the Official	Title of the Programme	Name of Conference/ Seminar/ Symposia/ Workshop/ Meetings	Dates
Dr. Poonam Choudhary	Oral presentation on “Mango Seed Kernel Phenolics and their Characterization”	6 th International Conference on Summer Strategies and Challenges in Agricultural and Life Science for Food Security and Sustainable Environment (SCALFE-2023) organized by	28-30 April, 2023

		Himachal Pradesh University, Summer Hill, Shimla, HP	
Dr. Dhritiman Saha	Oral presentation on “Application of Near-Infrared (NIR) Hyperspectral Imaging System for Protein Content Prediction in Chickpea Flour”	International Conference on Agriculture-Centric Computation (ICA 2023) organized by IIT Ropar	11-13 May, 2023
Dr. Ramesh Chand Kasana	Oral presentation on “Vinegar Production from Syrup Waste of Osmotically Dehydrated Aonla Fruits”	Natural & Organic Farming for Ecological, Economical & Nutritional Security organized by Organic Agricultural Society of India, CSKHPKV, Palampur	7-9 June, 2023
Dr. Rupinder Kaur	Annual Zonal KVK Workshop 2023	Annual Zonal KVK Workshop 2023, ATARI, Zone-1, Ludhiana	26-28 June, 2023
Dr. Renu Balakrishnan	Zonal Workshop	ATARI Zone –I, Ludhiana & GB Pant University of Agriculture & Technology	26-28 June, 2023

AWARDS & RECOGNITIONS

Awards

Name of the Awardee	Name of Award	Awarded from
Dr. Poonam Choudhary	Best Oral Presentation Award	6 th International Conference (SCALFE - 2023), held at Himachal Pradesh University, Summer Hill, Shimla, HP, India during 28 - 30 April, 2023
Dr. Guru P. N.	Best Researcher Award (INSO)	VD Good Professional Association [®] , Chennai, Tamil Nadu

Recognitions

- Dr. R. C. Kasana acted as an expert for the Online review of BIG 22 call proposals (10 project proposal) organized by SINE, IIT Bombay (Under BIRAC).

MoU SIGNED

a. MoU with Industries

S. No.	Title of the Project	Contracting Party	Duration
1.	Organization of Skill Development training in “Post-Harvest Processing and Value Addition” for youth/farmer/women and establishment of APCs	<i>Laxmi Jan Kalyan Sewa Sansthan</i> , Ghaziabad (UP)	3 years (23 May, 2023)
2.	Development of a Grain Image Processing Software for Rice Grain and Paddy	M/s Osaw Industrial Products Pvt. Ltd. (INDOSAW), Ambala	6 months (9 June, 2023)



MoU with INDOSAW

b. MoU with Universities

S.No.	Name of Universities/ Institutions	From	To
1.	Sher-e-Kashmir University of Agricultural Sciences & Technology (SKUAS&T) of Kashmir	10 May, 2023	9 May, 2033
2.	Maharashi Dayanand University (MDU), Rohtak, Haryana	18 May, 2023	17 May, 2026



MoU with SKUAST-K



MoU with MDU, Rohtak

MoA SIGNED

S. No.	Title of the Project	Contracting Party	Duration
1.	Incubation of spice processing	Mr. Paramjot Singh, Ahmedgarh	5 April, 2023

PATENT GRANTED

Title	Application No.	Inventors	Date of Grant	Patent Number
Mechanized System for popping and decortications of <i>Makhana</i> seeds (Gorgon Nut, <i>Euryale ferox</i>)	674/DEL/2013	Dr. SN Jha, Dr. RK Vishwakarma	8 June, 2023	434144

TRANSFER OF TECHNOLOGY

S. No.	Technology	Firm	Date of Licensing
1.	Groundnut based flavoured beverage, curd and paneer	Bikaji Foods International Ltd. Malad	27-28 April, 2023
		Mr. Varun Singhwani, Kanpur	



PERSONALIA

Joining		
Name of the Official	Date of joining	Joined as
Sh. Permod Sharma	10 April, 2023	F&AO
Dr. Ravi Prakash	11 April, 2023	Scientist
Dr. R. K. Vishwakarma	8 May, 2023	Project Coordinator AICRP on PHET

Sh. Permod Sharma



Dr. Ravi Prakash, passed B. Tech. (Dairy Technology) from ICAR-National Dairy Research Institute (NDRI), Karnal, India in 2013, followed by M. Tech. and Ph. D. in Dairy Engineering in 2016 and 2022, respectively, from Southern Regional Station of ICAR-NDRI, Bangalore, India. He secured all India Rank (AIR) 271 in GATE-2013 in the Engineering Sciences and 1st Rank in the NDRI Ph. D Entrance Examination in 2016. He has 3 research papers in the reputed journals, 10 papers in the national and international conferences, 3 book chapters, 23 articles and abstracts to his credit. He also filed 3 patents and received 14 awards and recognition from national and international organizations of repute including the

BIRAC-Gandhian Young Technological Innovation Award in 2018 and the DST-Lockheed Martin-Tata Trust-India Innovation Growth Program (IIGP) Award in 2019. He was nominated to 4th BRICS Young Scientist Forum in 2019 and received the 'First Place' in BRICS Young Innovator Prize. He won the Animal Husbandry Grant Challenge 2.0, for 'Development of Low-cost milk cooling and preservation system' in 2022. He joined as a Scientist in Agricultural Structure and Environmental Control Division of ICAR-CIPHET, Ludhiana on 11 April, 2023.

Transfer		
Name of the Official	Date of Transfer	Transferred to
Sh. B.C. Katoch, AAO	2 April, 2023	SAO, ICAR-IIMR, Ludhiana.
Sh. Manni Lal, F&AO	5 April, 2023	SF&AO, ICAR-IIMR, Ludhiana.
Dr. D. N. Yadav	28 April, 2023	Head, Dairy Technology Division, ICAR-NDRI, Karnal

Promotion		
Name of the Official	Date of Promotion	Promoted to
Sh. Dalu Ram, Sr. Tech. Asst	7 June, 2023	Technical Officer
Mrs. Sonia Rani, Sr. Tech. Asst	8 June, 2023	Technical Officer
Sh. Hardeep Singh, Sr. Tech. Asst	8 June, 2023	Technical Officer

FACILITIES IN THE ICAR-CIPHET PREMISES

ICAR-CIPHET provides amenities such as an open gymnasium and a badminton court to support the well-being of its residents. Additionally, a covered parking area for 36 vehicles is provided within the residential premises. Atop the ICAR-CIPHET guest house, the national flag is proudly raised at an elevation of 67 feet.



Open Gymnasium



Badminton Court



Tiranga at 67 feet height



Car Parking in residential area

कदन फसलों की उत्पादन तकनीक पर एक दिवसीय प्रशिक्षण कार्यक्रम का आयोजन



आयोजन में हिस्सा लेते हुए अधिकारी व किसान।

सर्वेरा न्यूज/कश्मीर, अंबोहर: कृषि विज्ञान केंद्र सीफेट पर अंतरराष्ट्रीय कदन (बादल) वर्ष-2023 के उपलक्ष्य में कदन फसलों की उत्पादन तकनीक पर एक दिवसीय प्रशिक्षण कार्यक्रम का आयोजन किया गया। इस कार्यक्रम का संचालन डॉ. रमेश कुमार प्रभारी कृषि विज्ञान केंद्र के निदेशन में राजेश कुमार एसीटीईओ द्वारा किया गया। इस प्रशिक्षण कार्यक्रम के उद्देश्य के तहत राजेश कुमार कदन फसलों की तकनीक पर सकार की योजनाओं पर प्रकाश डालते हुए इनकी उन्नत उत्पादन तकनीक व डीपट रजमदी अरीफ़ा द्वारा फल संचरण की तकनीकों पर व्याख्यान दिए गए। डॉ. रमेश कुमार ने प्रतिभागियों को परिचरक स्वास्थ को सुधारने के लिए कदन फसलों को छेदें स्तर पर अग्रजने के लिए प्रेरित किया। डॉ. रमेश कुमार द्वारा पोषण मूल्य एवं गुणवत्ता पर चर्चा की गई। इस प्रशिक्षण कार्यक्रम में कुल 10 प्रतिभागियों ने भाग लेकर कार्यक्रम को सफल बनाया। श्री अन्न एवं योजना को बढ़ावा देने के लिए कदन आधुनिक उत्पाद भी प्रतिभागियों को प्रेरित किए गए।

Deshpran 06.06.2023

कॉलेज ऑफ एग्रीकल्चरल इंजीनियरिंग में पर्यावरण सुरक्षा प्रतियोगिता आयोजित

रांची : विरसा कृषि विश्वविद्यालय अधीन संचालित कॉलेज ऑफ एग्रीकल्चरल इंजीनियरिंग में विश्व पर्यावरण दिवस के अवसर पर राष्ट्रीय सेवा योजना के अधीन आन स्पॉट पर्यावरण सुरक्षा आधारित विभिन्न प्रतियोगिता का आयोजन किया गया। एसोसिएट डीन ई डीके रूसिया ने बताया कि नव स्थापित कॉलेज ऑफ एग्रीकल्चरल इंजीनियरिंग के छात्र-छात्राओं को पर्यावरण के प्रति जागरूक और पर्यावरण को बढ़ावा देने के उद्देश्य से पहली बार प्रतियोगिता आयोजित की गयी। छात्र-छात्राओं ने महाविद्यालय में आयोजित ऑन स्पॉट पृथ्वी बचाओ प्रकृति बचाओ आधारित रंगोली कला, विश्व पर्यावरण दिवस पर लेख लेखन, बीट प्लास्टिक पॉल्यूशन कला प्रतियोगिता, पर्यावरण बचाओ पर स्लोगन लेखन एवं एक्सटेंसिभर प्रतियोगिताओं में जोश एवं उत्साह के साथ भाग लिया। मौके पर आयोजित समारोह में मुख्य अतिथि डीएसडब्ल्यू डॉ. बीके अग्रवाल ने विभिन्न ऑन स्पॉट प्रतियोगिताओं के विजेता छात्र-छात्राओं को पुरस्कृत किया। अपने संबोधन में कहा कि बदलते पर्यावरण की गंभीर स्थिति में कृषि अभियंत्रण की तकनीकी की बड़ी भूमिका होगी। साथ ही मृदा, जल एवं वायु प्रदूषण की वर्तमान स्थिति एवं शोध परिणामों की जानकारी दी। प्रतियोगिता के आयोजन में डॉ. उत्तम कुमार, डॉ. मिंटू जाँव, डॉ. प्रमोद राय, डॉ. छाया, डॉ. निती तिकी, डॉ. अल्पना दुबे, डॉ. वंदना चौबे एवं डॉ. सीमा साहू ने सहभागिता ली।

SKUAST-K hosts Quinquennial Review Meeting

Srinagar, May 19: Quinquennial Review Meeting to review five-year progress of AICRP on PHET & AICRP on PEASEM was held from 18th to 19th May at SKUAST-K Shalimar.

Expert panel comprising of Dr. N. C. Patel (Former Vice Chancellor, AAU, Anand), Dr. Pitam Chandra (Former Director, ICAR-CIAE, Bhopal), Dr. R. K. Jain (Ex. Principal, ADIT, Anand), Dr. Ashutosh Upadhyay (Prof. Dept. of FST, NIFTM, Kundali, Haryana), Dr. Uday Shankar Saha (Ex. Chair Professor, IRMA & Former CGM, NABARD, Mumbai), Dr. Sandeep Mann (PC-PEASEM) and Dr. R. K. Vishwakarma (PC-PHET) evaluated the five-year progress of Srinagar Centres of AICRP on PHET and AICRP on PEASEM along with AICRP on PHET Solan and AICRP on PHET Lakhnow.

At the inaugural ceremony Vice-Chancellor SKUAST-Kashmir, Prof. N. A. Ganai. In his presidential address, highlighted the impact of various AICRP schemes sponsored by Govt. of India and gave details of achievements of Srinagar Centres

of AICRP on PHET and PEASEM. He informed the house that goal of the University is to transform the agriculture from subsistence to commercial through Mechanization, Automation and use of Artificial Intelligence. The QRT team and participants had interaction with Vice Chancellor SKUAST-Kashmir wherein challenges faced by agricultural sector were discussed and future strategies chalked out. The MoU was signed between SKUAST-Kashmir and CIPHET Ludhiana for mutual cooperation in education and research that includes student and faculty exchange. Chairman QRT Dr. N. C. Patel appreciated the work done by different AICRP centres during the last five years and especially lauded the efforts of Srinagar Centre of AICRP on PHET.

He also gave a detailed account of scope of plastic culture in J&K for boosting agricultural productivity and farmers' income. Dr. R. K. Vishwakarma (PC-PHET) briefed about the

ommending body to ICAR regarding functioning of AICRPs.

He acknowledged the efforts of Prof. Syed Zameer Hussain, PI AICRP on PHET Srinagar Centre, being the first one to come up with value chain on walnut among the 20 centres assigned the work on value chain of different crops. It is pertinent to mention that in the previous Quinquennial Review Meeting (2012-17) Srinagar Centre of AICRP on PHET emerged as "Outstanding Centre" out of 32 such centres across the country. Dr. Sandeep Mann (PC-PEASEM), member secretary QRT thanked University authorities for smooth conduct of the meeting.

He stressed on choosing research issues based on local needs and emphasized on commercialization of the developed technologies. Prof. H.R. Naik, Director Planning & Monitoring welcomed the experts and Prof. S. A. Wani Dean, Faculty of Horticulture proposed the vote of thanks. Experts also visited laboratories, fields and facilities



आष्टीसीएआर-सीफेट कार्यक्रम का आयोजन।

आष्टीसीएआर-सीफेट ने मनाएँ आ जोग दिवस

पलवल संघ, सुप्रीमा: आष्टीसीएआर-सीफेट ने मनाएँ आ जोग दिवस। कार्यक्रम में भाग लेने वाले अधिकारियों और किसानों को प्रशिक्षण दिया गया।

आष्टीसीएआर-सीफेट ने मनाएँ आ जोग दिवस

पलवल संघ, सुप्रीमा: आष्टीसीएआर-सीफेट ने मनाएँ आ जोग दिवस। कार्यक्रम में भाग लेने वाले अधिकारियों और किसानों को प्रशिक्षण दिया गया।

उद्योग इंटरफेस व बागवानी फसलों पर जागरूकता कार्यक्रम का आयोजन

सर्वेरा न्यूज/कश्मीर, अंबोहर: सीफेट अंबोहर द्वारा राष्ट्रीय बागवानी बोर्ड चंडीगढ़ के सहयोग से संयुक्त रूप से उद्योग इंटरफेस व बागवानी फसलों पर जागरूकता कार्यक्रम का आयोजन हुआ। रमेश कुमार आयोजन में हिस्सा लेते हुए प्रतिभागी।



कार्यक्रम में हिस्सा लेते हुए प्रतिभागी।

कार्यक्रम में हिस्सा लेते हुए प्रतिभागी।