

# PAMETI

## REPORTER



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### From Director's Desk

Punjab's agriculture has achieved production heights in classic crops like wheat and rice, making them main focus of farming. Although this agricultural system has been very profitable for farmers over the past few decades, it is currently experiencing many challenges, such as declining soil quality and subsurface water table. Stubble burning is another major issue. Burning paddy straw releases too many particulates and gases into the air, which are dangerous to mankind. In addition, smoke irritates the eyes, throat, and lungs of healthy individuals.

Agricultural researchers have already developed technologies for both *in-situ* and *ex-situ* management of crop residues. Surface seeding of wheat is an economically viable alternative to burning and is an effective in-situ paddy straw management technology.

Here, extension workers have to play a crucial role in making the farmers aware about the ill-effects of open burning and benefits of residue management through efficient trainings and demonstrations at farmer fields.

Agricultural input dealers have a rapport with farmers and can serve as para extension agents in the state, guiding and advising the farmers for effective management of crop residues. Educating and demonstrating the residue management technologies at farmer fields can help in avoiding open burning of the crop residue. Therefore, the capacity building of the input dealers is required and PAMETI can assist in avoiding open burning in the state by teaching input dealers and farmers by using its infrastructure, resources, and connections with other agricultural institutions.



**Dr Kanwar Barjinder Singh,**  
Director, PAMETI

## Crop Diversification Options in Punjab

In today's agricultural scenario of Punjab, reliance on monoculture of wheat-rice has led to various challenges including declining water table, soil degradation and economic vulnerability. To cope up with these challenges, crop diversification is crucial. Farmers should be educated to grow alternative crops which can not only provide greater economic benefits but also ensure environmental sustainability.

Keeping this in view, a training was organized on April 04-05, 2024 in which 17 agriculture extension officials from district Amritsar participated.

Various faculty members from PAU talked about cultivation of oilseeds, maize and pulse crops to diversify from wheat-paddy farming system along with their respective economics. A guided visit to Agro-Processing Center (APC) at PAU was also organized, where trainees were made aware about the value addition of these crops to get better benefits.



**Dr T C Mittal showcasing the processing machinery to trainees during their visit to APC at PAU.**



**Practical exhibition of DSR machinery to PAMETI trainees by Dr. Jasvir Singh, PAU .**

## Direct Seeded Rice (DSR)

Traditional way of rice cultivation in Punjab by flooding fields, requires a lot of water which is considered the main cause of water scarcity issues in the state. Direct Seeded Rice(DSR) technique can address this problem by reducing the need for standing water in paddy thereby conserving water resources.

Using DSR technique, water can be saved considerably as seeds are sown directly into the soil rather than transplanting seedlings into the flooded fields. This method also results in reduced manual labor, lower production costs, less methane gas emission and less soil degradation.

However, DSR has its own challenges in terms of suitability of seed varieties and soil conditions, requirement of effective weed management, preparation and management of fields, etc. To address these challenges and to make the transition from the conventional rice cultivation to DSR smooth, capacity building of both extension functionaries and farmers need to be done so that DSR can be used effectively in the state.

Considering this objective in view, PAMETI has successfully conducted one-day six (6) training programmes as follows:

May 14, 15, 16 : For the field functionaries of Manav Vikas Sansthan (MVS)- an NGO from Himachal Pradesh and farmers from different districts of Punjab. A total of 255 trainees were trained in these trainings.

May 28, 29, 30 : For the field team members of Center for International Projects Trust (CIPT), New Delhi attended by a total of 86 participants.

During these programmes, participants were not only oriented about agronomic practices, weed management and integrated pest management in DSR, but a live demonstration of field preparation and seed sowing using 'Lucky Seed Drill' at PAU demonstration farm was also conducted.



**Dr S C Sharma, Technical Advisor and field functionaries from (MVS- NGO) with PAU experts and PAMETI faculty.**



**Exposure visit to PAU Honey Bee Farm by trainees during training on "Bee-Keeping" organized by FASC, Ferozepur under STRY.**



**Director PAMETI addressing the trainees during training on "Cultivation of Kharif crops in Punjab".**



**Visit to groundnut demonstration fields at PAU during training under NMEO-OP.**



**Participants during training on "Storage and Maintenance of Food Grains and other Agricultural Produce" organized by FASC, Tarn Taran under STRY.**

## **She-preneurship (Online, In collaboration with MANAGE, Hyderabad)**

Women Entrepreneurship or She-preneurship offers women the opportunity to achieve financial independence, foster personal growth and bring social change. In agriculture, women entrepreneurs not only play a crucial role in food production and value addition, but also contribute to development by creating jobs, improving infrastructure and supporting local economies.

So, in order to promote She-preneurship, an online training in collaboration with MANAGE was organised from 4-6 June, 2024 in which 60 trainees took part. Training included sessions on entrepreneurship, government support, agricultural marketing and work/life balance for women. Stories of successful women entrepreneurs were also shared with the trainees for motivation.

## **Cultivation of Kharif crops in Punjab**

In Punjab, during the *Kharif* season, paddy has traditionally been the dominant crop due to its favorable growing conditions and established market. However, for addressing the environmental, economic, and sustainability issues, re-evaluation of this mono culture is necessitated. Farmers should be encouraged to cultivate oilseed crops, pulses, *Basmati* or Direct Seeded Rice instead of traditional flooded rice cultivation practice.

Therefore, a one-day training in collaboration with Manav Vikas Sansthan (MVS) was conducted on 7th June, 2024, which was attended by 84 field functionaries and farmers. During the programme, participants discussed the practical challenges of alternate crops and experts addressed to their concerns. Trainees appreciated the efforts of the organizers and gave positive feedback.

## **Trainings under "National Mission on Edible Oil- Oil Palm"**

In order to fulfill the national objective of self-reliance in edible oils, "National Mission on Edible Oils - Oil Palm (NMEO-OP)" emphasized on promoting oilseed crops. Cultivation of oilseeds not only diversify from water guzzling crops but also help in growth of the agro-processing industry and environmental sustainability.

Therefore, a total of 3 two-day trainings under NMEO-OP were organized for field officers of State Department of Agriculture from the following districts:

July 18-19 : Gurdaspur and Ferozepur  
 July 22-23 : Tarn Taran  
 July 29-30 : SAS Nagar

A total of 70 officials were trained in practicalities of oilseed crops cultivation. Exposure visits to demonstration plots at PAU and processing machinery at CIPHET, Ludhiana were also conducted as part of the programme.

## Extension Strategies for Urban Agriculture

(Offline, in collaboration with Extension Education Institute (EEI), Nilokheri)

Urban agriculture provides opportunities to urban communities to grow their own fresh, organic and nutritious food. It includes kitchen gardening, rooftop gardening, vertical gardening, hydroponics, aquaponics, etc. Green spaces thus created in urban areas, improve environment and biodiversity.

Keeping this in view, a collaborative training with EEI, Nilokheri was organized from July 23-26, 2024 which was attended by 30 participants from state agriculture and allied departments. Sessions on kitchen gardening, dish gardens, hydroponics, growing medicinal and herbal plants, home garden landscaping, household waste management, etc. were organized during the training. Exposure visits to model Integrated Farming System (IFS) and hydroponics farms, PAU were also conducted. Trainees also visited the rooftop garden of a local resident S. Rajinder Singh Kalra, a member of Green Thumb Foundation-NGO at Ludhiana where they interacted with him and witnessed his hard work and passion towards urban farming.

## Skill Training of Rural Youth (STRY)

With the objective of imparting skill-based training to rural youth on agri-based vocational areas under STRY scheme, PAMETI, from April-July 2024, successfully conducted 17 six days trainings in 14 Nodal Training Institutes across different districts of Punjab. In these trainings, a total of 394 rural youth were trained. The major training areas were:

- Bee-Keeping
- Integrated Pest Management
- Food Processing

The trainings were planned with 60% practical and 40% theoretical content. Special emphasis was given on conducting exposure visits to progressive farmers so that the trainees get motivated to learn from them and start their own enterprises.

## Diploma in Agricultural Extension Services for Input Dealers (DAESI)

DAESI is a specialized program designed to enhance the skills and knowledge of input dealers in the agricultural sector. This diploma aims to improve their ability to provide valuable advice and support to farmers regarding agricultural inputs which can lead to better farming practices and increased productivity. Currently, this program is being conducted in six districts of Punjab, namely, Ludhiana, Faridkot, Ferozepur, Sri Muktsar Sahib, Bathinda and Moga. Three (03) batches of DAESI were inaugurated and classes commenced for the session 2024-25 at ATMA- Moga, ATMA- Faridkot, and ATMA- Sri Muktsar Sahib. Results for five (05) DAESI batches (2022-23) were prepared and submitted successfully during this period to MANAGE for final certification process.



**DAESI candidates during their exposure visits to Department of of Farm Machinery and Power Engineering, PAU and Biocarve seeds, Patiala .**



**Director PAMETI welcoming Dr Sanjay Kumar, Regional Director, EEI, Nilokheri and faculty during inaugural session of collaborative training on "Extension Strategies for Urban Agriculture".**



**Practical session about identification of medicinal plants by Dr B S lakhewali from PAMETI in progress during collaborative training with EEI on Urban Agriculture.**

## Other Activities

- Dr K B Singh, Director PAMETI and Mr Ravneet Singh, DD (PHT) attended state inspection workshop of FAO-GEF-7 FLOUR impact program at Kisan Bhawan, Chandigarh on 2nd April.
- 26th Annual General Meeting of PAMETI Governing Board was held under the chairmanship of the Sh. K A P Sinha, IAS, Hon'ble Special Chief Secretary, Agriculture, Punjab on 16th April.
- Ms Bharti Madan, DD (IT), Mr Ravneet Singh & Ms Vandana, DD(IT) attended an online training titled "Emerging Digital Technologies for Smart Farming: How IoT & Artificial Intelligence Transform Agriculture" organized by EEI, Nilokheri and MANAGE from 23-25 April.
- Dr K B Singh, Director PAMETI was Chief Guest at the inaugural event of DAESI Batch at ATMA Moga on 26th April.
- Ms Bharti Madan, Mr Ravneet Singh & Ms. Vandana attended online workshop on "Video Production Skills for Extension Professionals" organized by EEI, Nilokheri and MANAGE from 01-03 May.
- Dr Harmeet Kaur, DD (BM) attended an online collaborative training of MANAGE and NI-MSME titled, "Implementation of Digital Branding Reforms in Agricultural Marketing" from 6-10 May.
- Mr Ravneet Singh attended webinars on "Recent trends and prospects in the world cotton market and policy Developments", "Goat farming- A profitable enterprise for farmers" and "How Gender-Responsive are the Policies in Agriculture" Organized by MANAGE on 31 May, 20-22, and 28 June respectively.
- Ms. Bharti Madan and Mr Ravneet Singh attended online meeting on "Funds Utilization Status under RKVY (2024-25) under the chairmanship of Director Agriculture (DA), Punjab on 25 June.
- Dr. Rupinder Kaur, State Coordinator-DAESI, Punjab conducted a virtual meeting, to review the effectiveness of DAESI programme at district level, with all the Nodal Training Institutes (NTIs) on 5th July.
- Dr. Rupinder Kaur and Mrs. Bharti Madan delivered sessions to DAESI candidates at ATMA, Faridkot on 6th July.
- Ms.Vandana attended online workshop on "Climate Resilient Agriculture " organized by KVAFSU and MANAGE from 10-12 July.
- Dr Harmeet Kaur attended offline Annual STRY workshop (2024-25) at MANAGE, Hyderabad from 11-12 July.
- Mr Ravneet Singh held meeting with DA, Punjab regarding annual progress under ATMA scheme and problems faced by ATMA Staff, Punjab at Mohali on 29th July.

## ABOUT PAMETI, Punjab

SAMETI in Punjab, known as PAMETI (Punjab Agricultural Management and Extension Training Institute), is working as an autonomous institute at Punjab Agricultural University campus, Ludhiana to provide extension and management trainings to the state extension staff. The institute is registered under the Societies Act 1860 and started functioning in 2000.



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