

**BUREAU OF INDIAN STANDARDS****MINUTES**

<b>Name of the Committee</b>	<b>No. of Meeting</b>	<b>Date</b>	<b>Time</b>	<b>Venue</b>
<b>Apiary Industry Sectional Committee, FAD 3</b>	<b>21<sup>st</sup></b>	<b>18<sup>th</sup> October 2024 (Friday)</b>	<b>10.00 h</b>	<b>Sher-e-Kashmir University of Agricultural Sciences and Technology, Srinagar</b>

**CHAIRPERSON:**

**Prof. Pardeep K. Chhuneja**  
 Ex-Distinguished Professor Chair  
 Ex-Dean Postgraduate Studies  
 Member, ICAR-Project Advisory and Monitoring Committee  
 (PAMC - Honey Bees & Pollinators)

**MEMBER SECRETARY:**

**Debasish Mahalik**  
 Scientist-C/ Deputy Director  
 Food & Agriculture Department,  
 Bureau of Indian Standards,  
 New Delhi

**ATTENDANCE – Please see Annex A (Page 10 - 11)**

**ITEM 0 GENERAL****0.1 Welcome Adress by Dr Manzoor A Parray, SKUAST-K, Shalimar**

Dr Manzoor A Parray, SKUAST-K, Shalimar warmly welcomed all members present. He noted that approximately 75% of crops rely on honey bees for cross-pollination, while 15% are self-pollinated. He emphasized that trainings in the apiary sector by qualified apiculture professionals is instrumental for fostering entrepreneurship among youth and creating job opportunities for the unemployed. The support from the Ministry of Agriculture and Farmers Welfare, the National Bee Board, and industry partners in introducing various initiatives was highlighted. He mentioned that the National Bee Board has significantly aided them, leading to substantial benefits for the farming community. Furthermore, he acknowledged the important role of local Panchayati Raj Institutions in promoting these initiatives. He concluded by stating that the collaboration among these organizations enhances agricultural productivity and supports sustainable farming practices.

**0.2 Remark by the Member Secretary**

Shri Debasish Mahalik, Scientist-C/ Deputy Director, Food and Agriculture Department welcomed the Chairperson and members of FAD 3 to the 21<sup>st</sup> meeting of the committee. Shri Mahalik apprised the committee members regarding the various issues under consideration of the committee. Further, Shri Mahalik provided the brief report of the activities carried out under Apiary Industry Sectional Committee, FAD 3 covering standard formulation, R & D activities, ISO related activities and standards promotion. Mr Mahalik focused upon 4 major aspects: implementation of 'Handbook for

Technical Committee Members of Bureau of Indian Standards (BIS)'; focus on sustainability aspect in standardization; mandatory submission of inputs on circulated draft standards; and effort towards improving efficiency of the committee. Requesting for support from the committee, Shri Mahalik lauded the work done by the various members and urged for fruitful and conclusive deliberation on the issues raised in the agenda.

### 0.3 Opening Remarks by the Chairman

Prof. P. K. Chhuneja, Chairperson, Apiary Industry Sectional Committee, FAD 3 extended a warm welcome to the members to the 21<sup>st</sup> meeting of the Committee. He mentioned that they are now diversifying on honey bee species cultivation front with enabling scientific interventions as well as on hive products production front. He emphasized that all stakeholders in the honey supply chain must consolidate on quality conservation initiatives for the export of honey and also for various other products, and the same is also desired for our countrymen. He pointed out that our honey production is significantly lower compared to China, presenting a challenge for apiculture stakeholders in the country. He further stressed the need to enhance the productivity of apiary systems while also prioritizing quality. In FAD 3, collaborations are done to improve the apiary production system, focusing on higher-quality tools, machinery, processes, and best apiculture practices. He reminded everyone of the responsibility they hold to deliver the best possible outcomes promptly. As nominated committee members, they are morally obligated to ensure positive and tangible results. He then emphasized that all sales and purchases related to apiculture sector should be with ISI marked product, noting that the adoption of these standards would be a significant achievement, also mentioning the need to have analyses of all the hive products originating from the various flora from all ecological regions of the country.

## ITEM 1 CONFIRMATION OF THE MINUTES OF THE TWENTIETH MEETING

The committee noted that the minutes of the 20<sup>th</sup> meeting of Apiary Industry Sectional Committee, FAD 3 held on 25 July 2024 through Hybrid mode at Punjab Agricultural University, Ludhiana, Punjab were circulated vide our email dated 8 August 2024. As, no comments were received, the committee approved the minutes of 20<sup>th</sup> meeting without any further modification.

## ITEM 2 SCOPE, ACTIVITIES & COMPOSITION OF THE SECTIONAL COMMITTEE

### 2.1 SCOPE & ACTIVITIES OF THE COMMITTEE

**2.1.1** The committee noted the scope and program of work (PoW) of FAD 3 mentioned under **2.1.1**. After due deliberation, the committee decided to include process aspect of apiculture in the existing scope and modify the existing scope as follows:

*'Standardization in the field of apiary products, equipment, processes and good apicultural practices.'*

### 2.2 COMPOSITION OF THE COMMITTEE

**2.2.1** The committee noted that the nomination has not been received from Punjab State Cooperative Supply and Marketing Federation Limited (Markfed Punjab) and Tamil Nadu Agricultural University, Coimbatore, after multiple communications from Member Secretary, FAD 3. Having considered the lack of participation and contribution in Committee's work from the above organizations, the

committee decided to recommend their withdrawal of nomination from FAD 3 to Food and Agriculture Division Council (FADC).

Further, the committee decided to send a reminder to Forest College and Research Institute (FCRI), Hyderabad (Mulugu), Telangana, seeking nomination within 30 days. The absence of nomination from the organization in the allocated time period will lead to withdrawal of its nomination.

**2.2.2** The committee noted and analyzed the composition and attendance of the member organizations under FAD 3. Further, the committee FAD 3 decided to recommend co-option of following organizations to Food and Agriculture Division Council:

- a) University of Agricultural Sciences, Bangalore
- b) Odisha University of Agriculture & Technology, Bhubaneswar
- c) Krishi Vigyan Kendra (KVK), Baramati

Further, considering the suggestion received, the committee decided to communicate with National Institute of Food Technology Entrepreneurship and Management, Kundli; and National Institute of Food Technology Entrepreneurship and Management, Thanjavur to provide the information on their research expertise in the apiculture sector within a period of 60 days. Based on the response received, the decision regarding their co-option will be taken in the next committee meeting of FAD 3.

### ITEM 3 FINALIZATION OF ANNUAL ACTION PLAN FOR 2024-25

**3.1** The committee noted the information provided under 3.1 of the agenda and analyzed the current status of Annual Plan for Standardizations (APS) 2024-25 of FAD 3 enclosed at *Annex 3* of the agenda.

**3.2** The final approved Annual Meeting Calendar for the year 2024-25 is as follows:

Year 2024-2025	Quarter 1	Quarter 2	Quarter 3	Quarter 4
<b>Schedule</b>	April 2024	July 2024	October 2024	February 2025
<b>Venue</b>	Punjab Biotechnology Incubator, SAS Nagar (Mohali), Punjab	Punjab Agricultural University, Ludhiana, Punjab	Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir, Srinagar	CSIR - Central Food Technological Research Institute (CFTRI), Mysore

The committee noted the final approved Annual Meeting Calendar for the year 2024-25 provided under 3.2 of the agenda.

The committee further decided that exact dates for the meeting will be decided after due deliberation with Host organization and uploaded on BIS Standardization Portal.

### ITEM 4 FINALISATION OF DRAFT INDIAN STANDARDS

**4.1 Doc. No. FAD 03 (19968) C ‘Stainless steel storage containers for honey – Specification’**

The committee noted the information provided under 4.1 of the agenda and the following decisions were taken:

- a) Considering the document has been generated since 24-06-2022 (More than 2 yrs), the committee directed FAD 3/Panel V to submit the final draft to Chairperson, FAD 3 latest by 15 November 2024.
- b) Considering the delay in the submission of the draft, the committee decided that upon receipt of the draft by the chairperson FAD 3, with due approval of Chairperson, FAD 3, it will be directly sent into publication making necessary modifications as would be suggested by Chairperson, FAD 3.

#### **4.2 Bee Pollen - Specification**

The committee noted the information provided under 4.2 of the agenda. The committee then requested the working group constituting of Dr Jaspal Singh, PAU (Panel Chairperson); Dr Laxmi Rao; Dr Ajit Dua, PBTI and Dr P K Chhuneja, Chairperson, FAD 3 to submit the revised draft latest by 15 November 2024.

Further, the committee decided upon receipt of the draft, it will be circulated as a preliminary draft (P- draft) for a period of 21 days among the committee members for seeking their comments.

### **ITEM 5 WIDE CIRCULATION OF DRAFT INDIAN STANDARDS**

#### **5.1 Doc. No. FAD 03 (19924) P ‘Mass queen rearing apparatus for *Apis cerana* Fab. – Specification’**

The committee noted the information provided under 5.1 of the agenda. Further, the following decision were taken:

- a) Considering the document has been generated since 23-06-2022 (More than 2 yrs), the committee directed FAD 3/Panel V to submit the revised draft to chairperson FAD 3 latest by 15 November 2024.
- b) Considering the delay in the submission of the draft, the committee decided that revised draft upon receipt will be sent for wide circulation for the period of 60 days upon due approval of Chairperson, FAD 3 for seeking comments.

#### **5.2 Doc. No. FAD 03 (21719) P ‘Draft Indian Standard Pollen Trap – Specification’**

The committee noted the information provided under 5.2 of the agenda. Also, the committee noted the information provided by Dr Lakshmi Rao regarding lower availability and adoption of this type of Pollen Trap in the market (the type given in the above draft standard). Further, upon deliberation, Dr Jaspal Singh, PAU highlighted the disadvantages of using other pollen traps.

Considering the submissions, after due deliberation, the committee decided that a meeting of the FAD 3/Panel V should be held, where necessary deliberation shall take place considering the research data,

evidence, and market insights on both types of pollen traps. Thereafter, a decision shall be taken on the specifications of pollen trap to be included in the draft standard.

Further, the committee decided that in case the panel is unable to come to a conclusion regarding the content of the draft latest by 29 November 2024 considering the delay in finalizing the draft, the document shall be dropped. The decision regarding dropping the document taken by the panel in presence of Chairperson, FAD 3 shall be treated as approved.

### **5.3 Doc. No. FAD 03 (21967) P ‘Draft Indian Standard Mating Nucleus Hive – Specification’**

The committee noted the information provided under 5.3 of the agenda. The committee then requested to Member Secretary of FAD 3 to send the diagrams/ drawings to FAD 3/Panel V for review. Further, the committee decided to include the finalized diagrams in the draft and send for wide circulation for a period of 60 days after due approval of Chairperson, FAD 3. The committee then requested the panel to submit the revised draft to Chairperson, FAD 3 latest by 15 November 2024.

### **5.4 Doc. No. FAD 03 (23604) P ‘Draft Indian Standard Pollen Dispenser – Specification’**

The committee noted the information provided under 5.4 of the agenda. The following decisions were taken:

- a) Considering the document has been generated since 18-09-2023 (More than 1 yr), the committee directed FAD 3/Panel V to submit the revised draft to Chairperson, FAD 3 latest by 29 November 2024.
- b) Considering the delay in the submission of the draft, the committee decided that revised draft upon receipt will be sent for wide circulation for the period of 60 days upon due approval of Chairperson, FAD 3 seeking comments.
- c) Further, the committee requested to deliberate on the content of the draft in its next panel meeting. Further, the committee decided that in case the panel is unable to come to a conclusion regarding the content of the draft latest by 29 November 2024 considering the delay in finalizing the draft, the document shall be dropped. The decision regarding dropping the document taken by the panel in presence of Chairperson, FAD 3 shall be treated as approved.

## **ITEM 6 PRELIMINARY DRAFT CIRCULATION OF DRAFT INDIAN STANDARD**

### **6.1 Draft Indian Standard Specification for Honey Extractor, Radial type (first revision of IS 5427)**

The committee noted the information provided under 6.1 of the agenda. The following decisions were taken:

- a) Considering the delay in the submission of the draft, the committee requested every member of FAD 3/Panel V to actively contribute the work of panel.
- b) Further, the committee requested to the members of FAD 3 who are not part of the Panel and have expertise in the subject of the standard, to contribute to the work of the Panel.
- c) The committee requested to FAD 3/Panel V incorporate comments and diagrams to the draft and submit the revised draft latest by 29 November 2024.
- d) The revised draft upon receipt will be sent for wide circulation for a period of 60 days upon due approval of Chairperson, FAD 3.

**6.2 Doc. No. FAD 3(25813) P ‘Queen rearing frame for *Apis mellifera* Linnaeus – Specifications’**

The committee noted the information provided under 6.2 of the agenda. Considering the delay in the submission of the draft, the committee requested FAD 3/Panel V to submit the revised draft latest by 29 November 2024. The final draft upon receipt will be sent for wide circulation for a period of 60 days upon due approval of Chairperson, FAD 3.

**ITEM 7 NEW STANDARDS FOR STANDARDISATION****7.1 Doc. No. FAD 3 (25606) P ‘Good Apicultural Practices – Requirements’**

The committee noted the information provided under Agenda. After due deliberation, the committee requested Dr Jaspal Singh and Dr K M Kumara Nag to make the necessary changes in the draft based on comments received and submit the revised draft latest by 29 November 2024. The final draft upon receipt will be sent for wide circulation for a period of 60 days upon due approval of Chairperson, FAD 3.

**ITEM 8 REVIEW OF INDIAN STANDARDS**

**8.1** The committee noted the information provided under 8.1 of the agenda for revision of IS 4941: 1994 Extracted honey - Specification (second revision). After due deliberation, the committee requested Dr Ajit Dua, PBTI, Mohali to complete the review of the standard along with other relevant Experts and submit the draft revision prior to 22<sup>nd</sup> meeting of FAD 3. Further, the committee decided to prepare the draft revision based on ISO/DIS 24607 ‘Honey - Specification’ and FSSAI regulation.

**8.2 Review of Pre-2000 Indian Standards**

The committee noted the information provided under 8.4 of the agenda. The following decision were taken:

Sl. No.	IS Number	Decision taken in 20 <sup>th</sup> Meeting of FAD 3	Decision taken in 21 <sup>st</sup> meeting
i)	IS 14522 : 1998 Honey processing unit - Technical requirements	The committee noted the information and requested Shri Ashutosh Rai for expediate action.  Further, the committee requested Shri Rai to submit the draft revision of all the three Indian Standards before 21 <sup>st</sup> meeting of FAD 3.	The committee noted the information provided by Member Secretary of FAD 3 on the behalf of Shri Ashutosh Rai that the revised drafts will be submitted within in a month time.  The draft upon receipt will be considered for further circulation after due deliberation in next meeting of FAD 3.
ii)	IS 2072 : 1977 Specification for comb foundation (First Revision)		
iii)	IS 3894 : 1978 Specification for comb foundation mill (First Revision)		
iv)	IS 1736 : 1960 Specification for honey extractor, Tangential Type	The committee requested FAD 3/Panel V to submit the draft revision within a	The committee requested FAD 3/Panel V to submit the

		period of 2 weeks. The draft revision upon submission will be circulated among committee member seeking comment for a period of subsequent 2 weeks.	revised draft by 15 December 2024.
v)	IS 1504 : 1996 Beeswax, crude and refined specification (Third Revision)	The committee after due deliberation requested Dr Sanjivan, PBTI, Mohali to update the ToR considering inputs from Chairperson, FAD 3.  Further, the committee approved the modified ToR for sending to concerned department for hosting on BIS website.	Member Secretary, FAD 3 informed the committee that, the Modified ToR has been received from PBTI, Mohali.  Considering the same, committee requested to Member Secretary of FAD 3 to send the ToR to concern department for further action.
vi)	IS 8524 : 1977 Specification for solar wax extractor	The committee requested the member Secretary to circulate the above draft standard for a period of 2 weeks. The committee then requested all the members to provide their final input/comment on the draft standards within the time frame.  Further, the committee requested Dr Jaspal Singh (Convenor, FAD 3/Panel V) to deliberate on the comments/inputs within a subsequent period of 3 weeks in the panel and prepare the final draft for further circulation.  The final draft upon receipt will be sent for wide circulation upon due approval of Chairperson, FAD 3.	The committee requested FAD 3/Panel V to submit the revised draft by 29 November 2024.  The draft upon receipt will be considered for further circulation after due deliberation in next meeting of FAD 3.

**ITEM 9 INTERNATIONAL ACTIVITIES**

### 9.1 Status of ISO Ballots under ISO/TC 34/SC 19

The committee noted the information provided under 9.1 of the agenda. Further, the committee took the following decisions regarding questions of the ballot and decided to provide the same as response from India:

Type	Reference	Status	Start date	End date	Important Questions	Answer
CIB	Liaison with Global Honey Organization	Open	2024-10-08	2024-11-05	Do you approve the creation of A liaison with Global Honey Organization?	Approved
NP	ISO/NP 25290 Royal jelly lyophilized powder-Specifications	Open	2024-09-01	2024-11-24	a) Do you approve, disapprove or abstain on this NWIP? b) Which stage the document should be registered as? (WD/ CD/ DIS)	Approve  WD

### 9.2 Plenary Meeting of ISO/TC 34/ SC 19

The committee noted the information provided under 9.2 of the agenda. The committee approved the proposed Indian Delegation to attend the above said meeting in physical mode and requested the member Secretary to circulate the draft agenda of 5<sup>th</sup> Plenary meeting of ISO/ TC 34/ SC 19 'Bee products' whenever received to the members of the committee for a period of 7 days for seeking inputs. The approved Indian Delegation is as follows:

- Prof. Pardeep K. Chhuneja (*Chairperson, FAD 3*) – Leader of Delegation
- Dr Laxmi Rao (*In personal capacity*)
- Dr Ajit Dua, Punjab Biotechnology Incubator, Mohali
- Dr Jaspal Singh, Punjab Agricultural University, Ludhiana
- Shri Debasish Mahalik, Bureau of Indian Standards, New Delhi (*Member Secretary FAD 3*)

## ITEM 10 RESEARCH AND DEVELOPMENT PROJECTS

**10.1** The committee noted the information provided under 10.1 of the agenda and the following decisions were taken with respect to respective proposed R&D projects:

SI No.	R&D Project	Decision taken and Current Status	Decision taken in 21 <sup>st</sup> Meeting
a)	Study and Database generation for Acid Value in Indian Bees Wax	See 8.2 (v).	Member Secretary, FAD 3 informed the committee that, both the ToRs have been received from PBTI, Mohali.
b)	Study and database creation for quality parameters of Indian Bee propolis	In its 20 <sup>th</sup> meeting of FAD 3, the committee considering the request of Dr Ajit Dua, PBTI, Mohali; requested the Member Secretary, FAD 3 to provide the copy of	Considering the same, the committee requested to member secretary for circulating the ToR (Study and database creation for



		<p>ISO 24381:2023 ‘Bee propolis — Specifications’ to Dr Dua for developing the ToR. Further, the committee requested Dr Dua to submit the ToR latest by 21<sup>st</sup> meeting of FAD 3.</p> <p>The ToR is awaited.</p>	<p>quality parameters of Indian Bee propolis) for the period of 7 days for seeking comments, if any and lastly send the ToR to concern department for further action.</p>
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## ITEM 11 ANY OTHER BUSINESS

### 11.1 Adoption of Indian Standards in Apiculture Sector

The topic was thoroughly deliberated, with two key examples; implementation of Sub-Mission on Agricultural Mechanization (SMAM) scheme by the Ministry of Agriculture and Farmers Welfare; and the implementation of Quality Control Orders (QCOs) by Department for Promotion of Industry and Internal Trade (DPIIT). The examples were narrated by Member Secretary, FAD 3 for the understanding of committee members regarding integration of policy guidelines with Indian Standards.

Dr P.K Chhuneja highlighted the importance of implementation of Indian standards in apiculture sector for development of sector in itself. Dr Jaspal Singh, PAU proposed that the implementation can be mandated by creating guidelines at both state Level as well as at the level of the concerned ministry.

Namratha Khanna, IHA said that mandating Indian standards in apiculture will be necessary step for ensuring the necessary quality culture in apiculture sector. Further, considering National Bee Board to the nodal body, she proposed that the necessary action can be implemented by direction of National Bee Board, New Delhi with immediate effect. Further Dr K.K Dash, AC, NBB welcomed the suggestion and emphasized on immediately finding a suitable solution for ensuring implementation of Indian standards.

Considering the viewpoints of all the committee members, the committee finally requested Dr K.K. Dash to immediately develop a plan of action to address the issue in consultation with the Member Secretary, FAD 3; the Chairperson, FAD 3, and other concerned stakeholders. To begin with, NBB should write to all the industry members on the Executive of the NBB, Chief Secretaries of the States/UTs, to the concerned in MSME, to the Chairman KVIC, to the DG ICAR for implementation at the ICAR level, to all the PIs of the NBB funded IBDC and other projects and to the VCs of all the SAUs. Member NBB on FAD 3 shall ensure this action before the 21<sup>st</sup> meeting of the FAD3.

## ITEM 12 TIME AND PLACE FOR THE NEXT MEETING

As per the approved Annual Meeting Calendar, the committee tentatively decided to hold its upcoming meeting at CSIR - Central Food Technological Research Institute (CFTRI), Mysore in the month of February, 2024. The exact schedule will be communicated to committee members in the month of December, 2024 after due deliberation with host Member organization and Chairperson, FAD 3.

**ANNEX A**  
**ATTENDANCE**

**APIARY INDUSTRY SECTIONAL COMMITTEE, FAD 3**

**Date:** 18 October 2024

**Venue:** Sher-e-Kashmir University of Agricultural Sciences and Technology, Srinagar

Sl. No.	Organization	Members
1.	In Personal Capacity	<b>Prof. P. K Chhuneja,</b> <i>(Chairperson)</i>
2.	Punjab Agricultural University, Ludhiana	Dr Jaspal Singh
3.	Sher-e-Kashmir University of Agricultural Sciences and Technology, Kashmir	Dr Manzoor Ahmad Paray Dr Parveena Bano
4.	VOICE, New Delhi	Mr H. Wadhwa
5.	Indian Honey Alliance (IHA), New Delhi	Ms. Namrata Khanna
6.	ICAR-All India Coordinated Research Project on Honey Bees and Pollinators [AICRP(HB&P)], School of Agricultural Sciences and Rural Development, Nagaland University, Medziphema, Nagaland	Dr Avinash Chauhan
7.	ICAR-All India Coordinated Research Project on Honey Bees and Pollinators [AICRP(HB&P)], Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-Jammu), Jammu	Dr Devinder Sharma
8.	National Bee Board, New Delhi	Dr K. K. Dash Dr Dharmendra Lagoriya
9.	Bureau of Indian Standards, New Delhi	Mr Debasish Mahalik, <i>(Member Secretary)</i>
<b>Members joined the Meeting on Virtual Mode</b>		
Sl. No.	Organization	Members
1.	College of Agriculture, KAU, Thiruvananthapuram	Dr Amritha V. S. Dr Vijayasree V.
2.	Confederation of Indian Industry, New Delhi	Ms Yashi Ranjan
3.	Consumer Guidance Society of India, Mumbai	Dr Sitaram Dixit
4.	CSIR-Central Food Technological Research Institute, Mysore	Dr S. P. Muthukumar
5.	Dabur India Ltd., Sahibabad	Dr Anil Kumar
6.	Department of Entomology, Assam Agricultural University, Jorhat	Dr Mukul Kumar Deka Mr Partha Pratim Gyanudoy Das
7.	Department of Entomology, Chaudhary Charan Singh Haryana Agriculture University, Hissar	Mr Yogesh Kumar Ms Sunita Yadav
8.	Directorate of Marketing & Inspection, Faridabad	Mr Rahul Saini

9.	Dr Y.S. Parmar University of Horticulture and Forestry, Solan	Dr Meena Thakur Dr Manju Devi
10.	ICAR-All India Coordinated Research project on Honey bee & Pollinators, New Delhi	Dr K. M. Kumaranag
11.	ICAR-All India Coordinated Research Project on Honey Bees and Pollinators [AICRP(HB&P)], Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-Jammu), Jammu	Dr R. S. Bandral
12.	ICAR-Central Institute of Post-Harvest Engineering and Technology, Ludhiana	Dr Ranjeet Singh
13.	Indian Honey Alliance (IHA), New Delhi	Mr Apoorva B. V.
14.	Progressive Bee Keeper's Association, Ludhiana	Mr Jatinder Singh Mr Narpinder Singer
15.	Punjab Agricultural University, Ludhiana	Dr Amit Choudhary
16.	Punjab Biotechnology Incubator Agri & Food Testing Laboratory, Mohali	Dr Sanjivan Bahman
17.	Ramakrishna Mission Krishi Vigyan Kendra, Paraganas, West Bengal	Dr Chandan Kumar Mondal Dr Prabir Kumar Garain
18.	Tiwana Bee Farm, Ludhiana	Mr Jaswant Singh Tiwana
19.	In Personal Capacity	Dr K. Lakshmi Rao