

BUREAU OF INDIAN STANDARDS**MINUTES**

Name of the Committee	No. of Meeting	Date	Time	Venue
Agricultural Systems and Managements Sectional Committee, FAD 22	16 th	31 May 2024 (Friday)	10 30 h	ICAR- National Institute of Biotic Stress Management, Raipur

CHAIRPERSON:

Dr. P K Ghosh,
 Founder Director and Vice Chancellor,
 ICAR- National Institute of Biotic Stress Management,
 Raipur

MEMBER SECRETARY:

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

ATTENDANCE – Please see Annex A (Page 12-13)

Item 0 GENERAL**0.1 Welcome**

Shri Debasish Mahalik, Scientist-C/ Deputy Director, Food and Agriculture Department welcomed the Chairperson and members of FAD 22 to the 16th 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 Agricultural Systems and Managements Sectional Committee, FAD 22 covering standard formulation, R & D activities, ISO liasioning and standards promotion. Then, Mr. Mahalik focused on the recent initiative of BIS for creating Standardized Agriculture demonstration Farms (SADFs) in KVKs/ Agriculture Universities. Along with SADF, Mr. Mahalik highlighted the focus of Food and Agriculture Division Council and Bureau of Indian Standards on standards related agriculture practice, SMART farming, integrated farming systems etc. 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.

0.2 Opening Remarks by the Chairman

Dr. P. K. Ghosh, Founder Director and Vice Chancellor, ICAR- National Institute of Biotic Stress Management, Raipur and Chairperson, FAD 22, in his opening remarks welcomed all members to the 16th meeting of Agricultural Systems and Management Sectional Committee, FAD 22. Further, Dr. Ghosh requested all the members to enhance their physical participation in the subsequent meetings. He informed the members about the purpose and role of ICAR- National Institute of Biotic Stress Management, Raipur in national agriculture research and also standardization. He gave a brief description of the workshop held by Bureau of Indian Standards on May 30th 2024 at ICAR-NIBSM,

Raipur. Lastly, Dr. Ghosh appreciated all the committee members of FAD 22 for their contribution and requested for a continued effort in the work of standardization in the areas related to agriculture systems and management.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE FIFTEENTH MEETING

1.1 The committee noted that the minutes of the 15th meeting of Agricultural Systems and Managements Sectional Committee, FAD 22 held on 20 March 2024 were circulated via BIS Standards Portal dated 19 April 2024. As, no comments were received, the committee approved the minutes of 15th 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 Agricultural Systems and Managements Sectional Committee, FAD 22 enclosed at *Annex 1* of the agenda.

2.2 COMPOSITION OF THE COMMITTEE

2.2.1 the committee noted the information and the current status of the nomination received. Accordingly, the committee took the following decisions with respect to following organizations:

SI No.	Name of the Organization	Nomination Status	Decision taken in 16 th meeting
a)	CCS National Institute of Agricultural Marketing (NIAM), Jaipur	Nomination awaited	The committee decided to withdraw the nomination due to lack of response regarding nomination from the organization and other members are available with the required expertise.
b)	ICAR - Indian Agricultural Research Institute, New Delhi	Nomination awaited	The committee decided to write again to the organization seeking nomination. In case the nomination is not received till the next meeting of FAD 22, the nomination will be recommended for withdrawal.
c)	Sahyadri Farmers Producer Co Ltd, Nashik	Nomination awaited	The committee decided to withdraw the nomination due to lack of response regarding nomination from the organization and other members are available with the required expertise.
d)	Odisha University of Agriculture & Technology (OUAT), Bhubaneswar	Nomination awaited	The committee decided to write again to the organization seeking nomination. In case the nomination is not received till the next meeting of FAD 22, the nomination will be recommended for withdrawal.

2.2.2 The committee noted the updated composition of the committee along with record of participation in the last 2 meetings enclosed under *Annex 2* of the agenda.

ITEM 3 ANNUAL PLAN FOR STANDARDIZATION (APS) FOR 2024-25

3.1 The committee noted the current status of the progress in Annual Action Plan for the year 2024-25 (enclosed at *Annex 3* of the agenda) and requested the respective experts and panels for expedite action on the pending subjects.

3.2 The committee noted the Annual Meeting Callender for the year 2024-25 and modified as follows:

Year 2024-2025	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Schedule	31 May 2024	September 2024	-	February 2025
Venue	ICAR – National Institute of Biotic stress Management, Raipur	Agriculture & Water Technology Development Hub (AWaDH), IIT Ropar		Bureau of Indian Standards, New Delhi

ITEM 4 NEW STANDARDS FOR STANDARDIZATION

4.1 Doc. No. FAD 22 (22873) WC ‘Requirements on Farming Practices and Labelling of Naturally Produced Products - Natural Farming Production System’

The committee noted the information provided under 4.1 of the agenda regarding absence of any further information has been received from Ministry of Agriculture & Farmers Welfare, New Delhi regarding approval of National Mission on Natural farming and further need for standardization of natural farming production system till date.

4.2 Doc. No. FAD 22 (23578) WC ‘Integrated Pest Management – Requirements’

The committee noted the information provided under 4.2 of the agenda and deliberated upon the comments on the draft received from Dr. M N Bhat, ICAR-NCIPM, New Delhi (enclosed at *Annex 5* of the agenda). Later due deliberation, the committee accepted all the proposed modifications except the comment related to Adoption of validated and well refined indigenous technical knowledge (ITK) practices.

The committee decided to replace the ‘Adoption of validated and well refined indigenous technical knowledge (ITK) practices’ with ‘Adoption of indigenous and local knowledge’. Further, the committee requested Dr. Bhat to incorporate the above changes, make other necessary changes related to the above recommendation and submit the modified draft to Member Secretary, FAD 22. The draft upon receipt will be sent for publication.

4.3 Doc. No. FAD 22 (25549) P ‘Integrated Nutrient Management – Code of Practice’

The committee noted the information provided and the following decision were taken :

- a) The committee appointed Dr. Anup Das, ICAR Research Complex for Eastern Region (ICAR-RCER), Patna as the new convener of the FAD 22/WG 1: Integrated Nutrient Management Working Group in place of Dr. P K Ghosh, ICAR- National Institute of Biotic Stress Management, Raipur upon recommendation of Chairperson, FAD 22.
- b) The committee after analysing the document (enclosed at *Annex 6* of the agenda), noted that the above document is bulky. Therefore, the committee requested the FAD 22/WG 1 to concise the draft standard within a period of 15 days and circulate among the committee members for a period of 30 days seeking comments.
- c) The comments received will then be deliberated upon by the FAD 22/WG 1 before putting up to FAD 22 for approval for further circulation.

4.4 Integrated Management system for vermiculture

The committee noted the information provided and requested Member Secretary, FAD 22 to conduct an early meeting with Dr. S D Mishra, ICAR- IARI, New Delhi to deliberate the above subject and its scope for standardization.

4.5 Indian Standards and Draft standards on Good Agricultural Practices

The committee noted the information provided under 4.5 of the agenda related to above subject. The Member Secretary, FAD 22 informed the committee that as per direction issued by Chairperson, Food and Agriculture Division Council and DG, BIS; Food and Agriculture Department has decided to revise all the IndiaGAP series Indian Standards on priority basis for implementation under Standardized Agriculture Demonstration Farm (SADF) initiative of BIS and awareness among stakeholders. Subsequently, Dr. Manish Pande, Director & Head PAD Division, Quality Council of India, New Delhi and convener of FAD 22/Panel I : Panel on Good Agricultural Practices elaborated the complete ecosystem of standards related to GAP.

Considering the above information, after due deliberation, the following decisions were taken by the committee:

- a) The committee requested Dr. Manish Pande to constitute the panel by co-opting suitable experts and prepare the revised draft of IS 15930 (Part 1) : 2011 'Requirements for good agricultural practices - IndiaGap: Part 1 crop base' (aligning with IndGAP/Global GAP) within a period of 60 days. The draft revision upon receipt will be deliberated upon in the next meeting of FAD 22 for sending into wide circulation.
- b) The committee then recommended Quality Council of India to write to Food and Agriculture Department, BIS; Central Marks Department, BIS and any other related departments of BIS to conduct a deliberation of developing/modifying the conformity assessment scheme for GAP.
- c) After the publication of revision of IS 15930 (Part 1): 2011 'Requirements for good agricultural practices - IndiaGap: Part 1 crop base'; the other IndiaGAP standards will be taken up for revision.

4.6 Subjects identified under Standards National Action Plan (SNAP)

The committee noted the status of the subject identified under Standards National Action Plan (SNAP) Falling under the scope of FAD 22 and took the following decisions:

Sl No.	Subject for Standardisation	Current Status of subject under standardisation
a)	Guidelines for contract	The committee noted the information provided in the agenda.

	farming and commercial farming (Medium priority)	
b)	FAD 22 (23575) WC Hydroponic Farming Production System — Requirements (High priority)	The committee noted the information provided in the agenda and deliberated on the comments provided by Shri Shaildip Wagh, Essen Multipack Limited, Rajkot (enclosed at <i>Annex 8</i> of the agenda). After due deliberation, the committee accepted the editorial modification as proposed. The committee further, decided to send the above draft standard into publication with the approved modifications.

4.7 Subjects recommended by National Committee on Precision Agriculture and Horticulture (NCPAH), New Delhi

The committee noted the status of the subject identified NCPAH, New Delhi falling under the scope of FAD 22 and took the following decisions:

<i>Sl No.</i>	<i>Subject for standardization</i>	<i>Decision taken in 16th meeting of FAD 22</i>
a)	Solar greenhouse farming system	The committee noted the information provided and after due deliberation the following decisions were made: <ol style="list-style-type: none"> Based on the recommendation of Shri Ananad Zambre, Convenor, FAD 22/Panel II the committee requested Member Secretary, FAD 22 to write to Vice Chancellor and Director, Research of Junagadh Agricultural University (JAU), Junagadh and Vasantnao Naik Marathwada Krishi Vidyapeeth, Parbhani seeking nomination of expert in the area of Solar greenhouse farming system. Subsequently, the committee requested experts from ICAR-CIAE, Bhopal and Agriculture & Water Technology Development Hub (AWaDH), IIT Ropar to nominate experts to be part of FAD 22/Panel II within a period of 15 days. The committee then request experts from Jain Irrigation Systems Pvt. Ltd. to nominate experts to be part of FAD 22/Panel II within a period of 15 days. The committee requested Shri Ananad Zambre, Convenor, FAD 22/Panel II to convene an early meeting of the panel to initiate the necessary standardization activity on the above subject.
b)	FAD 22 (23576) WC Artificial Lighting System for Protected Cultivation — Requirements	The committee noted the information provided in the agenda and deliberated on the comments provided by Shri Rohit Lall, NCPAH, New Delhi (enclosed at <i>Annex 10</i> of the agenda). After due deliberation, the committee rejected the comment for replacing 'protected cultivation' with 'Controlled environment agriculture' as protected cultivation is more suitable term due to its wider scope and acceptability. The committee further, decided to send the above draft standard into publication with the approved modifications.

ITEM 5 REVIEW OF INDIAN STANDARDS

5.1 Review of Pre- 2000 Indian Standards

The committee noted the status of the Pre- 2000 Indian Standards under the scope of FAD 22 and took the following decisions:

<i>Sl No.</i>	<i>IS No.</i>	<i>Title</i>	<i>Decision taken in 16th TC</i>
a)	IS 14461:1997	Surface Covered Cultivation Structures- Glossary of Terms Doc No. FAD 22 (23618) F ‘Surface Covered Cultivation Structures — Glossary of Terms (first revision of IS 14461)’	The committee noted the information provided under the agenda.
b)	IS 14462:1997	Recommendation for layout, design and construction of greenhouse structures	The committee noted the information provided in the agenda. During deliberation, Shri Ananad Zambre, Convenor, FAD 22/Panel II informed the committee regarding development of a software for designing of greenhouse structures by Punjab Agriculture University, Ludhiana. However, Shri Zambre also mentioned that the verification and validation of the software by the FAD 22/Panel II is yet to be done. Considering this, the committee requested Shri Zambre to convene an early meeting to conduct necessary deliberation on whether to use the software to Study the Structural Stability and Design Specifications of Greenhouse Structures for different wind zones of India.
c)	IS 14485:1998	Recommendations for heating, ventilation and cooling of green houses	However, the committee further recommended that without relying much on the software developed as its validation and verification process is yet to be completed, the panel should review the scope of the ToR for R&D project FAD 0062 titled as ‘Study on Structural Stability and Design Specifications of Greenhouse Structures for different wind zones of India’ again keeping focus on budgetary and timeline constraint. Accordingly, the panel may modify/ divide into parts/withdraw/ rewrite the ToR and submit for the approval of the committee.
d)	IS 15175: 2002	Surface Covered Cultivation Structures- Establishment and Operation of Mist Chamber- Guidelines	The committee noted the Recommendation of Member Secretary, FAD 22 and decided that, the subject may be allocated to an intern who will work upon collection of required information for review of the standard. Further the committee recommended that, the intern will work in coordination with FAD 22/Panel II. The final

			report upon submission by Intern will be deliberated upon by FAD 22/panel II and necessary modification shall be made in the standard.
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ITEM 6 INTERNATIONAL ACTIVITIES

6.1 Participation in 1st plenary meeting of ISO/TC 347 Data-driven agrifood systems

The committee noted the information regarding participation of Indian delegation in the 1st plenary meeting of ISO/ TC 347 ‘Data-driven agrifood systems’ scheduled to be held on 10 April 2024 through virtual mode. Further, the committee requested the Indian Delegation to conduct the debriefing meeting and submit the report of the meeting to International Relations and Technical Information Services Department (IR&TISD), BIS within a period of 30 days.

6.2 ISO ballots under ISO/TC 347 Data-driven agrifood systems

The committee noted the status of the ballots received under ISO/TC 347 since previous meeting and accordingly the following decisions were taken :

Sl. No.	Reference	End date	Questions and answers		
a)	Ballot on new liaisons	2024-06-06	No.	Questions	Possible Answers
			1)	Do you agree to establish an ISO/TC 347 internal liaison to ISO/TC 23 SC 19 “Agricultural electronics”?	Yes
			2)	If you answered yes to question 1 above, please nominate a liaison officer by including his/her name in the space provided.	Abstain
			3)	Do you agree to establish an ISO/TC 347 internal liaison to ISO/TC 34 SC 20 “Food loss and waste”?	Yes
			4)	If you answered yes to question 3 above, please nominate a liaison officer by including his/her name in the space provided.	Abstain
			5)	Do you agree to establish an ISO/TC 347 internal liaison to ISO/TC 211 “Geographic information/Geomatics”?	Yes
			6)	If you answered yes to question 5 above, please nominate a liaison officer by including his/her name in the space provided.	Abstain
			7)	Do you agree to establish an ISO/TC 347 internal liaison to ISO/TC 93 “Starch (including derivatives and by-	Yes

			<table border="1"> <tr> <td data-bbox="660 192 740 271"></td> <td data-bbox="740 192 1275 271">products)” and to designate Dr. R. Andres Ferreyra as the liaison officer?</td> <td data-bbox="1275 192 1430 271"></td> </tr> </table>				products)” and to designate Dr. R. Andres Ferreyra as the liaison officer?										
	products)” and to designate Dr. R. Andres Ferreyra as the liaison officer?																
b)	Ad hoc group on a model and controlled vocabulary of crops	2024-06-26	<table border="1"> <thead> <tr> <th data-bbox="660 1144 740 1218">No.</th> <th data-bbox="740 1144 1177 1218">Questions</th> <th data-bbox="1177 1144 1430 1218">Possible Answers</th> </tr> </thead> <tbody> <tr> <td data-bbox="660 1218 740 1476">1)</td> <td data-bbox="740 1218 1177 1476">Do you agree to the creation of the ad hoc group to develop an NWIP for crop data interoperability standards in the area of Agrisemantics, subject to the terms of reference specified in N 40?</td> <td data-bbox="1177 1218 1430 1476">Yes</td> </tr> <tr> <td data-bbox="660 1476 740 1626">2)</td> <td data-bbox="740 1476 1177 1626">Do you agree for the ad hoc group to be convened by Mr. Stuart Rhea, as proposed by the originator of the proposal?</td> <td data-bbox="1177 1476 1430 1626"></td> </tr> <tr> <td data-bbox="660 1626 740 1843">3)</td> <td data-bbox="740 1626 1177 1843">Do you agree to nominate experts? Please provide the name(s).</td> <td data-bbox="1177 1626 1430 1843">The experts will be nominated at later stage after due approval by competent authority BIS.</td> </tr> </tbody> </table>			No.	Questions	Possible Answers	1)	Do you agree to the creation of the ad hoc group to develop an NWIP for crop data interoperability standards in the area of Agrisemantics, subject to the terms of reference specified in N 40?	Yes	2)	Do you agree for the ad hoc group to be convened by Mr. Stuart Rhea, as proposed by the originator of the proposal?		3)	Do you agree to nominate experts? Please provide the name(s).	The experts will be nominated at later stage after due approval by competent authority BIS.
No.	Questions	Possible Answers															
1)	Do you agree to the creation of the ad hoc group to develop an NWIP for crop data interoperability standards in the area of Agrisemantics, subject to the terms of reference specified in N 40?	Yes															
2)	Do you agree for the ad hoc group to be convened by Mr. Stuart Rhea, as proposed by the originator of the proposal?																
3)	Do you agree to nominate experts? Please provide the name(s).	The experts will be nominated at later stage after due approval by competent authority BIS.															

c)	Revised ballot on scope and title of ISO/TC 347	2024-06-19	No.	Questions	Possible Answers
			1)	Do you agree with the proposed ISO/TC 347 title “Data-driven agrifood systems”?	Yes
			2)	Do you agree with the scope of ISO/TC 347 as addressed in N 21 and presented and discussed at the plenary meeting on April 10th (see also meeting minutes, N 33)?	Yes
d)	Ad hoc group on greenhouse and controlled environment autom	2024-06-26	No.	Questions	Possible Answers
			1)	Do you agree to the creation of the ad hoc group to develop an NWIP for greenhouse and controlled environment automation standards, subject to the terms of reference specified in N 41?	Yes
			2)	Do you agree for the ad hoc group to be convened by Mr. Youngsun Kang, as proposed by the originator of the proposal?	Yes
			3)	Do you agree to nominate experts? Please provide the name(s).	The experts will be nominated at later stage after due approval by competent authority BIS.
e)	Ad hoc group on Integrated Pest Management (IPM)	2024-06-26	No.	Questions	Possible Answers
			1)	Do you agree to the creation of the ad hoc group on Integrated Pest Management (IPM) subject to the terms of reference specified in N 42?	Yes
			2)	Do you agree for the ad hoc group to be convened by Ms. Yuanyuan Zhuang, as proposed by the originator of the proposal?	Yes
			3)	Do you agree to nominate experts? Please provide the name(s).	The experts will be nominated at later stage after due approval by

					competent authority BIS.
f)	Ballot on creation of SBP	2024-06-26	No.	Questions	Possible Answers
			3)	Do you agree to the creation of the ad hoc group to develop a business plan for ISO/TC 347, subject to the terms of reference specified above? (A “no” vote means that developing the strategic business plan to be voted on by the committee shall be the responsibility of the Chair and Committee Manager only.)	Yes
			4)	Your national delegation may nominate up to 2 members to this ad hoc committee. If you choose to nominate members, please state their names below.	The experts will be nominated at later stage after due approval by competent authority BIS.

ITEM 7 STRATEGY FOR NEW SUBJECTS UNDER APS 2024-25

The committee noted the information provided under Item 7 of the agenda and after due deliberation the following decisions were taken as per the proposed priority as follows:

SI No.	Subjects under APS 2024-25	Related Panel/Working group (if any)	Proposed priority	Decision taken in 16 th TC
a)	Integrated Management system for vermiculture - Code of Practice	FAD 22/Panel IV	Low	See 4.4
b)	Solar greenhouse farming system	FAD 22/ Panel II	High	See 4.7 (1)
c)	Guidelines for establishment and operation of farmer producer group-based institutions	FAD 22/Panel V		The committee after due deliberation requested Member Secretary, FAD 22 to write to Ministry of Agriculture and Farmers welfare, New Delhi seeking clarity regarding the requirements and importance of developing Indian Standard on the subject.
d)	Guidelines for IoT/AI	No Panel/Working group	High	The committee after due

	based Animal Health Monitoring System			deliberation decided that, the subject will be taken up for standardization after completion of mapping exercise by WG2: Working group on Standardization Strategy for SMART Agriculture.
e)	Guidelines for Dairy farming practices for family farmers	No Panel/Working group	Moderate	The committee after due deliberation decided constitute a working group titled as FAD 22/WG 3 : Working Group on Guidelines for Dairy farming practices for family farmers under the convenorship of Dr. Anurag Saxena, ICAR-NDRI, Karnal. Further, the committee requested Dr. Saxena to co-opt suitable experts in the working group and convene the first meeting of the working group.

ITEM 8 MAPPING OF SMART AGRICULTURE ECOSYSTEM

8.1 The committee noted the information provided under Item 8 of the agenda. After due deliberation and consideration of Member Secretary's recommendation, the committee approved the constitution of 'WG2: Working group on Standardization Strategy for SMART Agriculture' under FAD 22. Further, the committee decided to provide the Convenorship to Agriculture and Water Technology Development Hub, IIT Ropar, Ropar.

8.2 During deliberation regarding the nomination of other member organizations in the working group, the committee realized that a clarity is required regarding the aspects to be covered under the working group, which will be crucial for seeking/receiving nominations of required experts. Therefore, the committee requested Dr Radhika Trikha, Chief Operating Officer (COO), Agriculture & Water Technology Development Hub (AWaDH), IIT Ropar to prepare a brief Terms of reference (ToR) within a period of 15 days and circulate among committee members for a period of 30 days seeking required nominations/ recommendation for nomination. Once, the nominations are received, the working group should convene an early meeting for necessary action.

8.3 At last, the committee decided that, as in capacity of Convenor of the working group Agriculture & Water Technology Development Hub (AWaDH), IIT Ropar may also nominate/select researchers, Industry, start-ups, progressive FPOs/farmers required to be co-opted as a part of this working group.

ITEM 9 TIME AND PLACE FOR THE NEXT MEETING

Considering the request received from Dr Radhika Trikha, Chief Operating Officer (COO), Agriculture & Water Technology Development Hub (AWaDH), IIT Ropar the committee decided

to conduct its 17th meeting of FAD 22 at IIT Ropar, Ropar in the month of September 2024. The committee further decided that, the schedule of the meeting will be finalized after due deliberation with Chairperson, FAD 22 and Dr Radhika Trikha.

ANNEX A
ATTENDANCE

AGRICULTURAL SYSTEMS AND MANAGEMENT SECTIONAL COMMITTEE, FAD 22

Date: 31 May 2024

Venue: ICAR - National Institute of Biotic Stress Management, Raipur

Sl. No.	Organizations	Members
1.	ICAR - National Institute of Biotic Stress Management, Raipur	Dr. P. K. Ghosh (<i>Chairperson</i>)
2.	Agriculture & Water Technology Development Hub (AWaDH), IIT Ropar	Dr. Radhika Trikha
3.	Consumer Voice, New delhi	Shri H. Wadhwa
4.	ICAR - Central Institute of Agricultural Engineering, Bhopal	Dr. Kondapally V. Ramanarao
5.	ICAR - Indian Veterinary Research Institute, Izzatnagar	Dr. A. K. Verma,
6.	ICAR Research Complex for Eastern Region (ICAR-RCER), Patna	Dr. Anup Das
7.	National Committee on Precision Agriculture and Horticulture (NCPAH), New Delhi	Shri Anand Zambre
8.	Quality Council of India, New Delhi	Dr. Manish Pande
9.	University of Agricultural Sciences, Dharwad	Dr. M. S. Shirahatti
10.	Bureau of Indian Standards, New Delhi	Mr. Debasish Mahalik, (<i>Member secretary</i>)
Virtual Attendees		
Sl. No.	Organizations	Members
1.	Anand Agricultural University, Anand	Dr. R. R. Gajera
2.	BAIF Development Research Foundation, Mumbai	Shri Pramod Takawale Dr. Vitthal Kauthale
3.	Consumer Voice, New delhi	Dr. Rajiv Jha
4.	Directorate of Plant Protection Quarantine and Storage, Faridabad	Ms. Sunita Pandey
5.	Essen Multipack Limited, Gujarat	Shri Shaildip Wagh
6.	G B Pant University of Agriculture and Technology, Pantnagar	Dr. A. S. Jeena
7.	ICAR-Central Avian Research Centre, Bareilly	Dr. Ashok Kumar Tiwari Dr. Sandeep Saran
8.	ICAR Research Complex for Eastern Region (ICAR-RCER), Patna	Dr. Amitava Dey Shri Banda Sainath
9.	Indian Institute of Farming System Research, Jamalullapur	Dr. Meraj Alam Ansari Dr. Jairam Choudhary
10.	Institute of Rural Management Anand (IRMA), Gujarat	Prof. Pramod Kumar Singh
11.	Jain Irrigation Systems Limited, Jalgaon	Shri D. N. Kulkarni

12.	National Centre for Integrated Pest Management, New Delhi	Dr. M. Narayana Bhat
13.	National Centre of Organic Natural Farming, Ghaziabad	Dr. Gagnesh Sharma Dr. Vachspti Pandey
14.	National Dairy Research Institute, Karnal	Dr. Anurag Saxena
15.	Punjab Agricultural University, Ludhiana	Dr. Rajesh Goyal
16.	Tea Board- Darjeeling Tea Research and Development Centre, Kurseong	Dr. Mahipal Singh Shri Rajesh Kumar Chauhan
17.	Vasundhara Agri Horti Producer Company Limited, Pune	Shri Surendra Verdia
18.	National Institute of Agricultural Extension Management (MANAGE), Hyderabad	Dr. Shalendra
<i>Invitees</i>		
1.	Agricultural and Processed Food Products Export Development Authority, New Delhi	Kangkan Pandit
2.	Consumer Voice, New delhi	Shri M. A. U. Khan
3.	ICAR - National Institute of Biotic Stress Management, Raipur	Shri Kalyan Mandal