

भारतीय मानक ब्यूरो/BUREAU OF INDIAN STANDARDS**खाद्य एवं कृषि विभाग /Food and Agriculture Department
कार्यवृत्त /MINUTES**

अनुभागीय समिति का नाम Name of the Sectional Committee	कृषि एवं खाद्य प्रसंस्करण उपकरण अनुभागीय समिति, एफएडी 20 Agriculture and Food Processing Equipment Sectional Committee, FAD 20
बैठक क्रमांक/No. of Meeting	25 th
दिन और दिनांक Day and Date	मंगलवार, 27 अगस्त 2024 Tuesday, 27 August 2024
समय Time	10:00 बजे 10:00 hrs.
बैठक का तरीका Mode of the meeting	भौतिक Physical
स्थान Venue	भारतीय मानक ब्यूरो (मुख्यालय), मानक भवन, नई दिल्ली, दिल्ली, भारत Bureau of Indian Standards (HQ), New Delhi, Delhi, India
अध्यक्ष/Chairperson	डॉ एस एन झा/Dr. S. N. Jha (अध्यक्ष, एफएडी 20/Chairperson, FAD 20) उप-महा निदेशक/Deputy Director General (कृषि अभियांत्रिकी/Agricultural Engineering) आईसीएआर-भारतीय कृषि अनुसंधान परिषद, नई दिल्ली/ ICAR-Indian Council of Agricultural Research, New Delhi
सदस्य सचिव/Member Secretary	श्री प्रदीप शर्मा/Mr. Pradeep Sharma (सदस्य सचिव, एफएडी 20/Member Secretary, FAD 20) वैज्ञानिक-बी/सहायक निदेशक/Scientist-B/Assistant Director खाद्य एवं कृषि विभाग/Food & Agriculture Department भारतीय मानक ब्यूरो/Bureau of Indian Standards नई दिल्ली/New Delhi - 110002

Note – See Attendance at Annex A on page 11

ITEM 0 GENERAL

0.1 Welcome

Mr. Pradeep Sharma, Member Secretary of the Agriculture and Food Processing Equipment Sectional Committee, FAD 20, extended a warm welcome to all committee members. He emphasized their invaluable contributions to the Bureau of Indian Standards' national standardization efforts in the area of post-harvest equipment. Mr. Sharma also urged members to consider each draft standard as a critical document and to ensure that every draft is thoroughly reviewed at least once.

Ms. Suneeti Toteja, Scientist-F and Head of the Food and Agriculture Department, also warmly welcomed the committee members. She underscored the importance of the committee's work and commended the members for the increased frequency of meetings, which were previously held annually. In her remarks, Ms. Toteja highlighted the key performance parameters (KPPs) used to evaluate the committee's efficiency, including meeting attendance, the timely publication of standards, and the provision of comments on P-drafts. She further requested all members to provide their feedback on each draft during its preliminary circulation (P-draft stage) and suggested that these subjects be proposed at the ISO level as well.

0.2 Opening Remarks by the Chairman

Dr. S. N. Jha, Chairperson of the Agriculture and Food Processing Equipment Sectional Committee, FAD 20, extended a warm welcome to all the members. In his opening remarks, he emphasized the significance of the committee's ongoing work and acknowledged the increasing proactiveness of the Bureau of Indian Standards (BIS). He also urged all members to thoroughly review each draft at least once and to provide comments during the P-draft stage. Dr. Jha noted that even if members have no specific comments, an expression of agreement with the draft should be submitted.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE TWENTY FOURTH MEETING

The committee confirmed the unanimously approved minutes of the 24th meeting of the Agriculture and Food Processing Equipment Sectional Committee, FAD 20, held on 4 April 2024 in physical mode, as circulated to the members vide email dated 11 April 2024.

ITEM 2 SCOPE, ACTIVITIES AND COMPOSITION OF THE SECTIONAL COMMITTEE

2.1 Scope & Program of Work of The Committee

The committee noted the scope and program of work of FAD 20 as given in Item 2.1 of the agenda.

2.2 Composition of The Sectional Committee

2.2.1 The committee noted the updated composition of FAD 20 as given in *Annex 2* of the agenda.

2.2.2 The committee discussed upon the request received from Dr Vinod H. Kalbande, principal member, representing Indosaw Industrial Products Private Limited, Ambala Cantt., Haryana. The request was regarding considering him in personal capacity in the committee as he will no longer be in this industry, however, the

committee decided to include him as in personal capacity only once he leaves the industry. Thereafter, the committee also requested member secretary to write to Indosaw Industrial Products Private Limited, Ambala Cantt., Haryana for nominating their representatives once Dr Kalbande comes in personal capacity.

2.3 Current Panel & Working Groups

The committee was apprised about the recent reforms made by BIS regarding constitution of panels and working groups under the sectional committee, wherein, the working groups may be constituted either under the panel or directly under the sectional committee, now :

- a) The panels shall cover a portion of scope of the sectional committee and can be constituted for longer period.
- b) The working group shall be constituted for a specific subject with defined timeline.

Considering the above points, the committee reviewed all the panels and working groups constituted earlier under the sectional committee, FAD 20 and following decisions were taken:

Sl. No.	Name of Panel or Working Group	Decision Taken
i.	FAD 20: P4 - To Formulate New Indian Standard and Review Existing Standard on Value Edition Panel	The committee decided to dissolve the panel.
ii.	FAD 20: P8 - To Formulate New Indian Standard on Seed Processing Plant Panel	The committee decided to dissolve the panel.
iii.	FAD 20: P9 - To Formulate New Indian Standard on Carrot Washer Panel	The committee decided to dissolve the panel as the work assigned to the panel has been completed.
iv.	FAD 20: P10 - To Formulate New Indian Standard on Paddy and Rice Processing, Paddy Cleaning Panel	The committee decided to dissolve the panel as there is no agenda item.
v.	FAD 20: P12 - To Formulate New Indian Standard on Stainless Steel for Drier Unit, Parboiling System and SemiP Rice Panel	The committee decided to dissolve the panel as the panel is not active.
vi.	FAD 20: P16 - To Formulate New Standards on Millet Processing Panel	The committee decided to dissolve the panel as the work assigned to the panel has been completed.
vii.	FAD 20: P17 - To Update Raw Material Specification of Rice Milling Equipment Panel	The committee decided to dissolve the panel as the work assigned to the panel has been completed.
viii.	FAD 20: P19 - Revision of Indian Standards on Agricultural Produce Milling Machinery Panel	The committee decided to retain the panel as the standard is under development.
ix.	FAD 20: P20 - Development of Indian Standards for Single and Twin-Screw Extruder Used in Food Industry Panel	The committee decided to convert this panel into a working group as FAD20/WG 6 “Development of Indian Standards for Single and Twin-Screw Extruder Used in Food Industry Panel”.
x.	FAD 20: P21 - Development of Indian Standards on Mechanical Fruit and Vegetable Grader Panel	The committee decided to convert this panel into a working group as FAD20/WG 7 “Revision of Indian Standard IS 15831 : 2009 Grader – Citrus – Size Based” with the following expert members:

		<p>a) Dr Nachiket Kotwaliwale, Director ICAR-CIPHET, Ludhiana (<i>convenor</i>)</p> <p>b) Dr Sandhya Singh, Senior Scientist, PAU, Ludhiana</p> <p>c) Dr V. Eyarki Nambi, Senior Scientist, NINFET, Thanjavur</p> <p>d) Mr Gurwant Singh, President, COFAME, Ludhiana</p> <p>Thereafter, the committee constituted a separate working group FAD20/WG 8 “Development of Indian Standard on AI Based Fruit Grader” with the following expert members:</p> <p>a) Dr Nachiket Kotwaliwale, Director ICAR-CIPHET, Ludhiana (<i>convenor</i>)</p> <p>b) Dr Sandhya Singh, Senior Scientist, PAU, Ludhiana</p> <p>c) Dr V. Eyarki Nambi, Senior Scientist, NINFET, Thanjavur</p> <p>d) Dr Sandeep Dawange, Scientist, ICAR-CIPHET, Ludhiana</p>
xi.	FAD 20: WG01 - Development of Indian Standard on Mobile Agro-processing Equipment Unit for Food-grains Working Group	The committee decided to retain the working group as the standard is under development.
xii.	FAD 20: WG02 - Revision of Indian Standard of Sugarcane Juice Extractor Working Group	The committee decided to retain the working group as the standard is under development.
xiii.	FAD 20: WG03 - Development of Indian Standard on Power Operated Jute Decorticator Working Group	The committee decided to retain the working group as the standard is under development and the group was requested to provide the first working draft within one month (before, 27 September 2024).
xiv.	FAD 20: WG04 - Development of Indian Standard on Coconut Dehusker Working Group	The committee decided to retain the working group as the standard is under development.
xv.	FAD 20: WG05 - Revision of Indian Standards on Grain Dryer Working Group	The committee decided to retain the working group as the standard is under development. The chairperson also suggested BIS secretariat to organize a seminar for the purpose of spreading awareness of importance of drying among the farmers.

ITEM 3 INDIAN STANDARDS PUBLISHED

The committee noted the list of Indian Standards published since the last (24th) committee meeting of the sectional committee, FAD 20.

ITEM 4 FINALISATION OF DRAFT INDIAN STANDARDS

Following drafts were sent into wide circulation (WC) as decided in the previous meetings of the committee and all had been completed the WC stage:

4.1 Draft Indian Standard FAD 20 (17388) WC Seeds/Grain Processing and Storage — Glossary of Terms

The committee reviewed the draft and found that some terminology need to be redefined, therefore, Dr. A. Carolina Rathina Kumari, Principal Scientist, ICAR-Indian Institute of Horticulture Research (IIHR) Bengaluru, Dr Ravindra Naik, Principal Scientist, ICAR-Central Institute of Agricultural Engineering (CIAE), Regional Centre, Coimbatore, and Dr Vikram Parasharam Kad, Principal Scientist, Mahatma Phule Krishi Vishwavidyalaya (MPKV), Rahuri were requested to review the draft and provide the corrected draft within one month of this meeting (before 27 September 2024). Thereafter, the committee decided that the corrected draft will be sent for publication with the approval of chairperson, FAD 20.

4.2 Draft Indian Standard FAD 20 (25391) WC Agriculture Produce Milling Machinery — Burr Mill — Specification and Test Code (First Revision of IS 14442)

The committee reviewed this draft prepared by Dr R. Visvanathan and noted that no comments were received during the wide circulation period, however, the editorial comments received from Dr Visvanathan were already incorporated in the draft. Therefore, after due deliberation, the committee finalized the draft standard.

4.3 Draft Indian Standard FAD 20 (24218) WC Pearler cum Polisher for Millets — Specification and Test Code

The committee reviewed this draft prepared by FAD20/Panel 16 and noted that no comments were received during the wide circulation period, however, the editorial comments received from Dr Visvanathan were already incorporated in the draft. Therefore, after due deliberation, the committee finalized the draft standard.

4.4 Draft Indian Standard FAD 20 (25325) WC Food Serving Utensils Made from Agri By-Products — Specification (First Revision of IS 18267)

The committee reviewed the draft and deliberated upon the comment received from Mr A. Chakraborty, East Regional Laboratory, BIS, Kolkata. The comment received was approved and decided to incorporate in the draft, however, the committee requested Dr R. Visvanathan to check the draft once the comment is incorporated. Thereafter, the committee decided to send the draft to publication once the draft is checked by Dr Visvanathan.

4.5 Draft Indian Standard FAD 20 (21688) WC Root and Tuber Vegetable Washer — Continuous Type — Specification and Test Code

The committee reviewed the draft prepared by FAD20/Panel 9 and noted that no comments were received during its wide circulation, however, the editorial comments received from Dr Visvanathan were already incorporated in the draft.

The committee, thereafter, deliberated on the material clause of the draft standard and decided to keep stainless steel as a mandatory requirement for all the components which are coming in direct contact with vegetable. Subsequently, the draft was modified in the meeting, and the committee finalized the same draft.

4.6 Draft Amendment FAD 20 (25827) WC Equipment for Manufacture of Fortified Rice — Specification (First Amendment to IS 17854)

The committee reviewed the draft amendment and noted that no comments were received during its wide circulation period of 30 days. Therefore, the committee after due deliberation, finalized the draft amendment.

5 APPROVAL OF DRAFT STANDARDS FOR WIDE CIRCULATION (WC)

5.1 Draft Indian Standard FAD 20 (24661) P Mobile Agro-Processing Equipment Unit for Food Grains — Safety Requirements

The committee reviewed the latest draft standard prepared by FAD20/Working Group 1 and noted the modification made since the last meeting of the committee regarding inclusion of include the requirement for static and dynamic balancing of the unit in order to avoid the toppling of trolley due to improper location of center of gravity. Subsequently, the committee after due deliberation, decided to send this draft for wide circulation for a period of 60 days.

5.2 Draft Revision FAD 20 (24575) Seed/grain processing machinery — Indented cylinder grader — Specification and Test Code (First Revision of IS 12576)

The committee reviewed the draft submitted by Dr R. Visvanathan and noted that this draft was made after incorporation of specification of indented cylinder grader as IS 12576 covers test methods only. However, the draft revision is under preparation and needs more information to be included, therefore, the committee requested Dr R. Visvanathan to provide the complete draft. Thereafter, the committee decided to send this draft into P-draft circulation stage once the draft is received from Dr Visvanathan.

ITEM 6 NEW DRAFT INDIAN STANDARDS

6.1 Draft Indian Standard on Coconut Dehusker — Specification and Test Code

The committee reviewed the draft prepared by FAD20/WG4 and noted the information shared by Dr Ravindra Naik regarding the industry visits, meetings and discussions made for the development of the working draft. Subsequently, the committee after due deliberation decided to send this draft as a P-draft circulation for a period of 21 days.

6.2 Draft Indian Standard On Agricultural Produce Milling Machinery — Hammer Mill — Specification And Test Code

The committee reviewed the draft submitted by Dr Sandeep Kumar Dawange after incorporation of material, performance and constructional requirement of hammer mill. Subsequently, the committee decided to send the draft as a P-draft circulation for a period of 21 days.

6.3 Draft Indian Standard on Power Operated Jute Decorticator — Specification and Test Code

The committee noted the information shared by the member secretary regarding first meeting of FAD20/WG 3 “Development of Indian Standard on Power Operated Jute Decorticator” and the current status of the draft. Subsequently, as the working draft was not prepared, the committee directed the working group to provide the working draft within a month.

ITEM 7 NEW WORK ITEM PROPOSAL (NWIP)

7.1 AI Based Automatic Grain Analyzer

The committee accepted the proposal received from Mr R. K. Sinha, Deputy General Manager (Quality Control), Food Corporation of India (FCI), Head Quarter, New Delhi for development of Indian Standard on AI Based Automatic Grain Analyzer.

Thereafter, the committee constitute the working group FAD20/WG 9 “Development of Indian Standard on AI Based Automatic Grain Analyzer” with the following expert members:

- a) Dr Nachiket Kotwaliwale, Director, ICAR-CIPHET, Ludhiana (**Convenor**)
- b) General Manager, Quality, Food Corporation of India, GoI
- c) Representative from Central Warehouse Corporation, GoI
- d) Representative, Centre for Development of Advance Computing, Kolkata
- e) Representative, Punjab State Cooperative Supply & Marketing Federation Limited
- f) Representative from M/s Nebulaa Innovations Pvt. Ltd. Hyderabad.
- g) Representative from M/s Agnext Technologies Pvt. Ltd., Mohali.
- h) Representative from M/s Upjao Agri Tech. Pvt. Ltd.
- i) Representative from M/s IW software Pvt. Ltd.
- j) Dr Rakesh Bhardwaj, ICAR-National Bureau of Plant Genetic Resources (NBPGR), New Delhi

7.2 Indian Standards on Machineries Used in Pellet Manufacturing Plants

The committee decided to take up the proposed in the committee, FAD 20. The proposed subject was to develop Indian Standards on testing of major equipment of non-torrefied pellet plant e.g. dryer, chipper, shredder, hammer mill, pelleting machine, cooler, dust collector/extractor, conveyors etc.

Therefore, the committee after due deliberation, constituted the working group FAD20/Panel 22 “Development of Indian Standards on Equipment Used in Production of Non-torrefied Pellets” with the following expert members:

- a) Dr Mukesh Jain, Director, NRFMTTI, Hissar (**Convenor**)
- b) Dr R. K. Vishwakarma, Principal Scientist, ICAR-CIPHET, Ludhiana
- c) Dr Vinod Kumar Bhargav, Principal Scientist, ICAR-CIAE, Bhopal
- d) Dr U. C. Dubey, Principal Scientist, ICAR-CIAE, Bhopal
- e) Dr Sandip Gangil, Principal Scientist, ICAR-CIAE, Bhopal
- f) Representative from Central Power Research Institute, Bangalore
- g) Representatives from COFAME, Ludhiana

The panel was requested to prepare the first working draft before 27 October 2024.

ITEM 8 STATUS OF RAMAINING AGENDA ITEMS

8.1 The remaining agenda items taken from the minutes of previous meeting is given in below table:

Sl. No.	Indian Standards/ Doc. No.	Title	Current Status
1.	FAD 20 (21766) P	Single screw extruder — Specification	<p>The committee deliberated on the current status of the working group and noted that the first working draft for Single and Twin-Screw Extruder is prepared by Dr R. Visvanathan, however, it needs further discussion among the group members as apprised by Dr Visvanathan.</p> <p>The document number FAD 20 (21766) P was earlier generated for Single screw extruder — Specification only, therefore, the committee decided to drop this document number, and the new document number will be generated once the new working draft is prepared.</p>
2.	FAD 20 (20567) WC	Spiral grader — Test Code	The committee noted that the draft covering both specification & test code was yet to be received from ICAR-CIPHET, Ludhiana, therefore, the committee decided to send a reminder to Director, ICAR-CIPHET, Ludhiana for providing the modified draft for spiral grader specification & test code.
3.	FAD 20 (17385) P	Grader — Citrus — Size based (first revision of IS 15831)	The committee directed the working group FAD20/WG 7 (see 2.3, sl. no. x) to provide the draft revision before next meeting of the committee.
4.	FAD 20 (20568) WC	Seed cotton cylinder cleaners — Test code	The committee noted that this draft completed the wide circulation stage, however, as per the latest practice of committee, specifications for seed cotton cylinder cleaner is yet to be incorporated in the draft. Therefore, the committee

			requested Dr V. G. Arude to provide the modified draft accordingly.
5.	IS 8108 (Part 1) : 2019	Methods of Test for Grain Dryers Part 1 : Selection & Preparation of Test (Second Revision)	The committee noted the current status of the working group FAD20/WG5 and requested to prepare the following draft revisions
6.	IS 8108 (Part 2) : 1984	Test Code for Grain Dryers Part 2 : Methods of Test for Continuous Dryers	
7.	IS 8108 (Part 3) : 1985	Test Code for Grain Dryers Part 3 : Methods of Test for In-Silos Dryers	
			<p>a) Draft revision of IS 8108 (Part 1) Agricultural Dryers — Continuous Type — Specification and Test Code (Third Revision)</p> <p>b) Draft revision of IS 8108 (Part 2) Agricultural Dryers — Batch Type — Specification and Test Code</p> <p>Thereafter, the committee suggested BIS secretariat to organize a seminar for spreading the awareness on the agricultural grain dryers and its adoption specially among the farmers once the draft revisions are prepared.</p>
8.	IS 6997 : 2021	Test Code for Sugarcane Crushers (first revision)	The committee noted the current status of the working group FAD20/WG2 and considered the recommendations made by the group. Thereafter, the committee requested the group to prepare the draft revision before next committee meeting.
9.	IS 1973 : 1999	Sugarcane Crusher — Specification (third revision)	
10.	IS 15561 : 2005	Sugarcane Crushers — Safety Requirement	

8.2 IS 8824 (Part 1) : 2022 Electrical Moisture Meters — Specification — Part 1 Food Grains Seeds and Flour (First Revision)

The committee discussed upon the comments received from Agnext Technologies Pvt. Ltd. regarding measurement of repeatability and uncertainty in moisture meter testing along with the guidelines of International Organization of Legal Metrology (OIML) & draft Rules on moisture meters for cereal grains and oilseeds as issued by Department of Consumer Affairs, Legal Meteorology Division, GOI.

Thereafter, the committee decided to send this Indian Standard IS 8824 (Part 1) : 2022 to Dr Sangita Chopra, Principal Scientist, ICAR-IARI, New Delhi for examining the query raised and reviewing the standard. Subsequently, the committee decided to send the draft to the chairperson, FAD 20 once received from Dr Chopra for further review.

ITEM 9 ANY OTHER

9.1 The committee while discussing various drafts observed the lack of inputs during WC from the relevant stake holders, particularly from the manufacturers. Therefore, the committee decided to send the draft to all the concerned manufacturers during the wide circulation stage. The committee also requested Mr Gurwant Singh, President, COFAME, Ludhiana to provide the details of all the manufactures so that they can be added in the mailing list of the sectional committee, FAD 20.

9.2 There being no agenda item, the meeting ended with vote of thanks by the chairperson and member secretary of the committee.

ITEM 10 TIME AND PLACE FOR THE NEXT MEETING

Not date or place was decided in the meeting, however, the notice for the next meeting will be circulated well in advance for the convenience of members.

ANNEX-A
ATTENDANCE FOR

**25th Meeting of Agriculture and Food Processing Equipment
Sectional Committee, FAD 20**

Date: 27 August 2024

Meeting Type: Hybrid (Virtual + Physical)
Room: Mimansa (White room)
**Venue: Bureau of Indian Standard (HQ),
New Delhi, Delhi, India.**

Sl. No.	Organization	Members Details
1.	Indian Council of Agricultural Research, New Delhi	Dr Shyam Narayan Jha (<i>Chairperson</i>)
2.	Confederation of Food and Agro-Processing Machinery Enterprises , Ludhiana	Mr Gurwant Singh (<i>Principal Member</i>)
3.	ICAR-Central Institute of Agricultural Engineering, Bhopal	Dr Ravindra Naik (<i>Principal Member</i>)
4.	ICAR-Central Institute of Post-Harvest Engineering and Technology, Ludhiana	Dr Sandeep Mann (<i>Principal Member</i>) Dr Sandeep P. Dawange (<i>Alternate Member</i>)
5.	ICAR-Indian Institute of Horticultural Research, Bengaluru	Dr A. Carolina Rathina Kumari (<i>Principal Member</i>)
6.	Mahatma Phule Krishi Vidyapeeth, Rahuri	Dr Vikram Parasharam Kad (<i>Principal Member</i>)
7.	Ministry of Agriculture, Department of Agriculture, New Delhi	Mr. Y. K. Rao (<i>Alternate Member</i>)
8.	National Institute of Food Technology, Entrepreneurship and Management, Thanjavur	Dr S. Bhuvana (<i>Principal Member</i>)
9.	North Eastern Region Farm Machinery Training and Testing Institute, Biswanath Chariali	Mr M. R. Patil (<i>Representative Member</i>)
10.	Northern Region Farm Machinery Training and Testing Institute, Hisar	Dr Mukesh Jain (<i>Principal Member</i>)
11.	Punjab Agricultural University, Ludhiana	Dr Rohit Sharma

		<i>(Alternate Member)</i>
12.	Sahyadri Farmers Producer Company, Nashik	Mr Shrikant Kulkarni <i>(Alternate Member)</i>
13.	In Personal Capacity	Dr R. Visvanathan <i>(Personal Capacity)</i>
14.	In Personal Capacity	Dr S. D. Deshpande <i>(Personal Capacity)</i>
15.	Food & Agriculture Department, BIS, New Delhi	Ms Suneeti Toteja Scientist-F/Director and Head
16.	Food & Agriculture Department, BIS, New Delhi	Mr Pradeep Sharma (Scientist-B/Assistant Director)