



**STANDING COMMITTEE ON CHEMICALS AND FERTILIZERS  
(2025-26)**

**(EIGHTEENTH LOK SABHA)**

**MINISTRY OF CHEMICALS AND FERTILIZERS  
(DEPARTMENT OF CHEMICALS AND PETROCHEMICALS)**

**REVIEW OF THE FUNCTIONING OF INSTITUTE OF PESTICIDE FORMULATION  
TECHNOLOGY (IPFT)**

**NINETEENTH REPORT**



**सत्यमेव जयते**

**LOK SABHA SECRETARIAT**

**NEW DELHI**

***FEBRUARY, 2026/ MAGHA, 1947 (SAKA)***

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TECHNOLOGY (IPFT)**

*Presented to Lok Sabha on 10<sup>th</sup> February, 2026*

*Laid in Rajya Sabha on 10<sup>th</sup> February, 2026*



**LOK SABHA SECRETARIAT  
NEW DELHI**

***FEBRUARY, 2026/ MAGHA, 1947 (SAKA)***

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**COMPOSITION OF THE STANDING COMMITTEE ON CHEMICALS AND  
FERTILIZERS  
(2025-2026)**

**Shri Azad Kirti Jha - Chairperson**

**MEMBERS  
LOK SABHA**

2. Shri Brijmohan Agrawal
3. Shri Ajay Bhatt
4. Shri Robert Bruce C.
5. Shri Bharatsinhji Shankarji Dabhi
6. Smt. Kriti Devi Debbarman
7. Dr. Kalyan Vaijinathrao Kale
8. Shri Malvinder Singh Kang
9. Shri Babu Singh Kushwaha
10. Shri Utkarsh Verma Madhur
11. Shri Praveen Patel
12. Dr. Sambit Patra
13. Shri Balram Naik Porika
14. Shri Sachithanantham R.
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17. Shri Daggumalla Prasada Rao
18. Shri Tharaniventhan M.S.
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20. Dr. Ricky Andrew J. Syngkon
21. Shri Shivmangal Singh Tomar

**RAJYA SABHA**

22. Shri Naresh Bansal
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24. Dr. Bhagwat Karad
25. Shri Rwngrwa Narzary
26. Shri Subhash Chandra Bose Pilli
27. Shri Arun Singh
28. Shri Akhilesh Prasad Singh
29. Shri Tejveer Singh
30. Shri G.K. Vasani
31. Vacant

**SECRETARIAT**

1. Smt. Maya Lingi - Joint Secretary
2. Ms. Miranda Ingudam - Director
3. Shri Kulvinder Singh - Deputy Secretary

## INTRODUCTION

I, the Chairperson, Standing Committee on Chemicals & Fertilizers (2025-26) having been authorized by the Committee do present on their behalf, this Nineteenth Report (Eighteenth Lok Sabha) on 'Review of the functioning of Institute of Pesticide Formulation Technology (IPFT)' pertaining to the Ministry of Chemicals and Fertilizers (Department of Chemicals and Petrochemicals).

2. The Committee had a briefing by the representatives of the Department of Chemicals and Petrochemicals on 8<sup>th</sup> September, 2025.

3. The Committee considered and adopted this Report at their Sitting held on 06<sup>th</sup> January, 2026.

4. The Committee wish to express their thanks to the officers of the Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers for tendering evidence and placing before the Committee all the requisite information related to examination of the subject.

5. The Committee also place on record their appreciation for the valuable assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

6. For ease of reference and convenience, the Observations/ Recommendations of the Committee have been printed in bold letters in the body of the Report.

**New Delhi;**  
**06 January, 2026**  
**16 Pausa, 1947 (Saka)**

**AZAD KIRTI JHA**  
**CHAIRPERSON,**  
**STANDING COMMITTEE ON**  
**CHEMICALS AND FERTILIZERS.**

## **REPORT**

### **A. INTRODUCTION:-**

Institute of Pesticide Formulation Technology (IPFT) was established in 1991, as an autonomous institution, under the Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Government of India. IPFT is working on development of user and environment friendly new generation pesticide formulation technologies.

The main objectives of IPFT are stated to be as follows:-

- Development and production of user and environment friendly pesticide formulation technology.
- Promotion of efficient application technologies suiting the existing requirements of the newer formulations.
- Information dissemination for safe manufacturing practices, quality assurances, raw material specifications and sources.
- Providing Analytical and consultancy services.
- Continuing education in research through specialized training for pesticide personnel working in agrochemical R&D.

### **B. GENESIS AND GOALS OF IPFT**

2. On being asked about the genesis behind the establishment of IPFT, the Department submitted that in the year 1986, the United Nations Industrial Development Organization (UNIDO), in collaboration with the Government of India, launched the Pesticide Development Program in India (PDPI) to introduce new-generation pesticide formulations through Indian industries. The program was later extended and renamed as the Pesticide Development Centre (PDC) in 1989. The Government of India, in May 1991, established IPFT as an Autonomous Institute under the Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers, as the successor of PDPI/PDC.

3. When asked to state whether IPFT has been able to achieve its goals and objectives in the last 34 years of its functioning, the Department submitted that since its inception in 1991, the Institute has developed 86 pesticide formulations, out of which 64 technologies (74.41%) have been transferred to industries, including both synthetic and bio-botanical formulations, directly benefiting the Indian agrochemical sector. It has also undertaken extensive work in analytical services, residue and persistence studies, and bio-efficacy evaluation, thereby supporting industry compliance with national and international regulations. In the last six years, IPFT has developed 47 new formulations, conducted 31 analytical studies, 115 bio-evaluation studies, filed nine patents (two granted) and published 27 research papers in reputed journals. Additionally, through Farmer Awareness Programmes, industry interaction

meets, skill development initiatives, and international training programs in collaboration with organizations like OPCW, IPFT has contributed significantly to knowledge dissemination and capacity building.

4. Though IPFT is an autonomous body but apparently the Department of Chemicals and Petrochemicals gives the grant for salary, general expenditure and Capital expenditure. The Committee desired to know the reason for the same. In reply thereto, it was submitted that IPFT has been set up for development of safe and environmental friendly pesticide formulations. The Institute generates revenues through technology transfer, testing and analytical services, bioefficacy and other studies or projects. Part of the expenditure is borne by the Institute from revenue generated by it like expenditure on hiring of consultants, office expenses and some services while the Department of Chemicals and Petrochemicals (DCPC) provides grants towards salary, general expenditure, and capital expenditure.

5. The Committee were informed that the main objective of IPFT is stated to be the development and production of user and environment friendly pesticides formulation technologies and once the technologies are developed, then to promote efficient application technologies as per the requirement of the formulations. To a query as to whether pesticides formulation technologies was first developed and then put to use or they were developed as per the requirement of the users, it was submitted that IPFT does development and/or standardization of advanced pesticide formulation technologies based on the specific requirements of different pesticide industries. IPFT also undertakes R&D activities on its own to develop new, safe to use and environment friendly pesticide formulations for which requirement will arise in future.

6. The Committee were further informed that IPFT was also supposed to disseminate information for safe manufacturing practices, quality control of the materials and institutes provides the analytical and consultancy services to various industries including MSMEs and also education for specialized training for research in pesticides. The Committee therefore desired to know as to how IPFT discharge these functions. It was submitted thereupon that IPFT disseminates information on safe manufacturing practices and quality control through technical bulletins, guidelines, awareness programs and industry workshops. The Institute provides analytical and consultancy services by utilizing its laboratories for testing pesticide formulations, raw materials, residues and environmental samples, which helps industries including MSMEs comply with regulatory requirements and improve product safety. IPFT also organizes specialized training programs, workshops and hands-on courses for scientists, industry professionals and students, thereby building capacity in areas such as pesticide formulation, quality assurance, analytical techniques and environmental safety.

### **C. PESTICIDES NEW GENERATION FORMULATION**

7. Asked to give details of user and environment friendly new generation pesticides formulation technologies which are being developed by the IPFT and also asked to explain how they are better than the conventional pesticides formulations, it was submitted that conventional pesticide formulations such as Dusts (DP), Wettable Powders (WP) and Emulsifiable Concentrates (EC) have been in use for a long time. While they provide adequate bio efficacy, they have certain limitations concerning user and environmental safety. EC formulations, for example, contain large amounts of petroleum-derived organic solvents, which pose flammability risks during production, storage, transportation, and application. Additionally, these solvents evaporate, contributing to local air pollution. DP and WP formulations, being composed of fine dusty powders, present a risk of inhalation during production and application. During spraying, wind can further disperse these powders, contaminate non-target areas and expose the applicator. In comparison, new-generation pesticide formulations are safer for both users and the environment. Water-based formulations such as Suspension Concentrates (SC), Emulsion-in-Water (EW) and Microemulsions (ME) reduce or eliminate the use of organic solvents. Water Dispersible Granules (WDG) are granular products that readily disperse in water to prepare spray solutions, minimizing the risk of powder inhalation and off-target contamination. Other advanced formulations, like Microcapsule Suspensions (CS), are water-based and provide prolonged activity of the active ingredient for effective pest control. Combination formulations containing two or three active ingredients reduce the number of sprays required while controlling multiple pests efficiently. IPFT has developed and successfully transferred various new-generation formulation technologies, including SC, EW, WDG, CS, combination products, suspo-emulsions, and adjuvant-based formulations, aimed at improving bio-efficacy and tank-mix compatibility. The details of such technologies developed/ transferred during 2025-26 were stated to be as follows:

- i. Copper Sulphate Pentahydrate 23.99% SC formulation is transferred to M/s Shyam Chemical Ltd., Mumbai. The developed formulation is a stable, water-based product with a built-in adjuvant for producing good bio-efficacy;
- ii. Developed Benzoyl Sulphonamide Compound Suspension Concentrate (SC) insecticide formulation, which is micronized formulation designed for efficient pesticide application with enhanced stability and fast dispersion in water for spray application. This technology has been transferred to CSIR-IICT, Hyderabad;
- iii. Combination ZC formulation of weedicides containing first active Metsulfuronmethyl in free form and second active Pendimethalin inside microcapsules for providing immediate knockdown and slow release of weedicides for management of orobanchae weed in mustard crop is developed;

iv. Botanical based citronella and lemongrass microemulsion formulations are being developed for nematode control as safer alternative to chemical pesticides.

8. On being asked to highlight any specific advantage for the users *viz* farmers, hospitals, ordinary citizens etc. through the use of these new generation pesticides formulations, the Department submitted the details of various technologies which are advantageous for the farmers, hospitals, ordinary citizens etc. along with their specific advantages are as follows:-

i. Imidacloprid 2.15 Gel bait formulation developed to minimize the use of organic solvent-based sprays for controlling cockroaches;

ii. Neem based Cream, Suspension Concentrate, spreading oil, tablet formulations have been developed to minimize use of chemical pesticides for controlling mosquitoes in household and public health applications.

iii. The Suspo-Emulsion, WDG of insecticide fungicide combinations have been transferred to different industries. Such formulations are advantageous to farmers as combination of 2-3 pesticides in single application save water and labour cost on spray.

9. On a specific query about the price at which the new generation pesticide formulation for agriculture management is available in the market, it was submitted that the price of new-generation pesticide formulations for agricultural management varies depending on the type of pesticide, formulation technology, concentration and brand. Bio-botanical formulations, being newer and developed with advanced technologies, are generally priced higher than conventional synthetic pesticides due to higher production costs, smaller-scale manufacturing, and ongoing R&D. Prices also depend on packaging size, target crop, and market demand. IPFT, while developing these formulations, provides technology transfer and guidance, but actual market pricing is determined by the industry partner, taking into account production cost, commercialization strategy and affordability for farmers.

10. Asked about steps IPFT has initiated so far or proposed to make farmers aware of its new generation pesticide formulation for agriculture management, the Department replied that IPFT has initiated several steps to make farmers aware of its new-generation pesticide formulations for agricultural management. These include Farmer Awareness Programmes, field demonstrations, and training workshops across different regions to educate farmers on the safe and effective use of bio-botanical, neem-based, and other advanced formulations. The Institute also distributes brochures, manuals and translated materials in local languages to disseminate information.

11. When asked whether farmers in particular are being benefitted through use of the environment friendly pesticides formulations in the Country, the Department

replied that the farmers are being benefitted through use of these environment friendly pesticides formulations in the Country. Water-based formulations such as Suspension Concentrates (SC), Emulsion-in-Water (EW) and Microemulsions (ME) reduce or eliminate the use of organic solvents and reduce the hazards like risk of flammability, skin contamination by organic solvents. Water Dispersible Granules (WDG) are granular products that readily disperse in water to prepare spray solutions, minimizing the risk of powder inhalation and convenient spray application. The new generation combination formulations offer the advantages of application of two or three pesticides in single spray application, thereby minimizing water and labour requirements in crop protection.

12. When specifically asked whether there has been any impact on enhancing production of wheat, paddy and other crops through effective pests' control through the use of such pesticides. The Department informed that the technologies developed that are useful for wheat and paddy crop are as follows:

- i. The Metsufuron methyl 20 WG formulation and Deltamethrin 20 WG formulation developed and transferred to industries are used for weed control and insect control respectively in wheat crop.
- ii. Fipronil 5 SC formulation developed and transfer technology to industry controls different insects in paddy and other crops.

13. When asked whether IPFT was making adequate efforts for awareness/sensitisation of the general public of its new generation pesticides formulation for agricultural and house hold pest management, it was submitted that IPFT was actively creating awareness about new-generation pesticide formulations and safe applications through Farmer Awareness Programmes, field demonstrations, training workshops, and exhibitions. It also disseminates information via brochures, regional-language materials, social media and its Hindi magazine, Krishirasayan Digidarshika and also collaborates with State Agriculture Departments. These efforts encourage farmers, households, and the general public understand and adopt safer, eco-friendly pesticides for agricultural and household pest management.

14. Asked to state the mechanism of IPFT to market its new generation pesticides formulation for agricultural as well as house hold pest management and their pricing, it was submitted that IPFT is a research and development Institute focused on the development of pesticide formulation technologies. The Institute does not engage in production or marketing of any formulations. The Institute after development of formulations transfers the technologies to the industries for commercial production and marketing.

15. When asked about steps taken by IPFT to make the pesticides safer for human beings and also for crops, it was submitted that IPFT has undertaken several steps to make pesticides safer for human beings as well as crops. Conventional pesticide

formulations such as Dusts (DP), Wettable Powders (WP), and Emulsifiable Concentrates (EC), though effective, have limitations regarding user and environmental safety. For instance, EC formulations contain large amounts of petroleum-derived organic solvents, which pose flammability risks during production, storage, transportation, and application, and contribute to local air pollution upon evaporation. Similarly, DP and WP formulations, composed of fine dusty powders, present inhalation risks during production and application and can be dispersed by wind, contaminating non-target areas and exposing applicators. In contrast, new-generation pesticide formulations are safer for both users and the environment. Water-based formulations such as Suspension Concentrates (SC), Emulsion-in-Water (EW), and Microemulsions (ME) reduce or eliminate the use of organic solvents. Water Dispersible Granules (WDG) are granular products that disperse in water to prepare spray solutions, minimizing powder inhalation and off-target contamination. Other advanced formulations like Microcapsule Suspensions (CS) are also water-based and provide prolonged activity of the active ingredient, ensuring effective pest control. Additionally, combination formulations containing two or three active ingredients reduce the number of sprays required while controlling multiple pests efficiently. IPFT has developed and successfully transferred various new-generation formulation technologies—including SC, EW, WDG, CS, combination products, suspo-emulsions, and adjuvant-based formulations—all aimed at improving bio-efficacy, tank-mix compatibility, and safety for users and the environment.

16. Asked to state as to the farmer awareness programme for promoting the safe use of pesticides were initiated by IPFT & what is the periodicity of such programmes conducted by IPFT it was submitted that the farmers awareness programmes were initiated in the year 2022-23. A total of 32 programs were conducted during 2022-23, 2023-24 and 2024-25. The list of farmers awareness programs conducted by IPFT sponsored by DCPC under CPDS is attached at Annexure.

17. Asked to state as to how many farmers participated in the Farmers Awareness Programmes and how the farmers are benefitting from them it was replied that 9223 farmers have participated in farmer awareness programmes. The detailed list of farmers in the programmes is as per Annexure. In these programme farmers are made aware to understand the safe and judicious use of pesticides, good agricultural practices, integrated pest management and use of locally available botanicals for crop protection.

18. When asked about the feedback of farmers towards Farmers Awareness Programmes the Department submitted that the Farmers have provided positive feedback during the discussion with them regarding IPFT's Farmers Awareness Programmes, which aim to educate them on safe pesticide use, integrated pest management (IPM), eco-friendly practices and quality control of agrochemicals.

19. Asked about the reaction of the farmers towards new generation pesticide formulation for agriculture management. It was submitted that the response of farmers

during discussion in the farmers awareness programs toward new-generation pesticide formulations developed by IPFT has been generally positive, particularly to bio-botanical, neem-based, and eco-friendly products during field demonstrations and awareness programs. Farmers have appreciated the safety, residue-free nature, and environmental friendliness of these formulations, though some have noted that the effects may be slower compared to conventional chemical pesticides. Overall, farmers recognize the long-term benefits for crop safety, soil health, and consumer protection, and IPFT continues to engage and educate farmers to enhance adoption and confidence in these sustainable pest management solutions.

#### **D. LABORATORIES OF IPFT**

20. Asked about laboratories of IPFT functioning at present and whether those laboratories are sufficient for the IPFT to achieve its goals and objectives and what are the constraints faced by IPFT in the discharge of its mandate. The Department submitted that the laboratories of the Institute are under three Divisions, viz., Formulation Division, Analytical Division and Bioscience Division. The details were stated to be as follows:

- Formulation Division: The division has necessary laboratory setup for development of pesticide formulations for agricultural as well as household pest management. It also has pilot plant facilities that can scale up lab scale research to a commercial production with optimum budget. The pilot plant facility of IPFT has the capacity to produce the formulations up to 100 kg per shift.
- Analytical Division: The Analytical facility is accredited and equipped for chemical testing of pesticides (Technical & Formulations), pesticide residues in various food matrices, chemical warfare agents and their precursors and degradation products. The Analytical laboratory has been recognized/certified by:
  - a. BIS for the testing of pesticide formulations as per IS specifications.
  - b. National GLP compliance monitoring authority (NGCMA) as GLP facility for physical-chemical analysis and residue studies of agrochemicals.
  - c. NABL as per ISO/IEC 17025:2017 for testing of 278 pesticides and 17 heavy metals in various food commodities, 150 pesticide formulations and CWC related chemicals.
  - d. Department of Agriculture and Farmers Welfare as laboratory for analysis for biostimulant.
- Bioscience Division: The set up is equipped to evaluate the different pesticide formulations developed by this institute or by the industry for their

commercial viability, through well-equipped bio-assay laboratory, green house/glass house and experimental field trials. The laboratory is recognized by Central Insecticide Board/Registration Committee (CIB & RC) for generation of data on bio-efficacy, phytotoxicity, phytotoxicity, compatibility, effect of pesticides on natural enemies of pests and residual aspects of pesticides.

IPFT laboratories are equipped with analytical instruments such as GC, HPLC, Preparative HPLC, GC-MS, GC-MS/MS, LC-MS/MS, LC-HRMS (LC/Q-TOF & LC-Orbitrap-MS), LC-ICP-MS, NMR, CHNSO Analyser, DSC-TGA, FTIR and other equipments related to physical-chemical analysis of pesticides and their formulations.

Scientific posts are vacant at present, out of which for 02 posts offer letter to join have already been issued by IPFT. For the remaining posts the recruitment is under process. The requirement of technical personnel is being met by Institute through project and contractual staff. The Institute is also making all efforts to promote adoption of bio-based pesticides formulations by Industry.  
(LOP Reply Q. No.15)

21. The Committee were informed that since its inception, IPFT had developed 47 formulations out of which 16 formulation technologies were transferred to Industry for commercial production which amounted to a mere 34 percent. The Committee therefore desired to know the reasons for this low percentage and the constraints faced as well as initiatives taken to enhance this figure in future. The Department submitted that since its inception, IPFT has developed 86 pesticide formulations, of which 64 have been successfully transferred to agrochemical industries i.e. 74.41% technologies have been transferred. Most of the transferred technologies are synthetic chemical-based pesticides. Over the past six years, IPFT has primarily focused on the development of bio-based pesticide formulations through in-house R&D as well as externally funded projects, due to the need to reduce ecological impacts of pesticide. At present, the market for bio-based formulations is not very robust. Due to the safety and sustainability aspects of bio-based formulations, it is expected that in future there will be a lot of demand in such formulations. Therefore, even if IPFT is not able to transfer such formulation at present they will be transferred in future once the market for bio-based pesticides is developed. The institute is also establishing biofoundry under the BioE3 policy under the Govt. of India. The biofoundry will be exclusively working on biopesticides and their formulations and the demonstration at pilot scale.

22. The Committee were also informed that since its inception in 1991, the institute has developed 64 formulation technologies that have been transferred to various industries. Please give details. How IPFT monitors the technologies transferred by it.

23. Since its inception in May 1991, IPFT has transferred 64 formulation technologies covering synthetic pesticides, bio-botanical products to various industries and institutions. Following technology transfer, the recipient industries are responsible for

generating regulatory data and pursuing commercialization as per the guidelines of the Central Insecticide Board & Registration Committee (CIBRC), and other regulators.

#### **E. DEVELOPMENT OF FORMULATIONS & THEIR TRANSFER**

24. IPFT had developed 47 formulations and successfully transferred 16 of these to various industries such as Hindustan Insecticide Limited, J.N. Agri Sciences etc. The Committee desired to know reasons for huge difference between formulations developed and formulations transferred and also Whether the 31 formulations which could not be transferred to the industries could not meet their requirements or reasons for non-transferring of the formulations to the industry. It was submitted that in the last six years, IPFT has developed 47 pesticide formulations, out of which 16 technologies have been transferred to various industries such as HIL (India) Limited and J.U. Agri Sciences, representing approximately 34 percent of commercialization. After development of formulations, the data generation as per regulatory requirement has to be done. Such studies are in progress for 19 formulations. Post formulation development studies were completed for 7 formulations and these were published/patented, further work is to be carried out regarding efficacy, environment impact etc for these formulations.

25. The Committee specifically desired to know whether the expenditure/efforts/money spent by IPFT on the 31 formulations which could not be transferred has gone into the drain. The Department submitted that for the 31 formulations the data generation as per regulatory requirement has to be done. Such studies are in progress for 19 formulations. The Institute was making efforts for publicizing about these formulations through industry meets.

26. The Committee desired to know whether IPFT is itself engaged in sale of its products particularly house-hold pesticides etc in reply it was replied that IPFT is not engaged in the sale of its products, including household pesticides. The Institute's mandate was focused on research, development, and technology transfer. After developing a formulation, IPFT transfers the technology to industries, which then handle manufacturing, marketing and distribution.

27. In reply to a specific query of the Committee whether IPFT market its products on its own, it was submitted that IPFT was primarily engaged in the development of pesticide formulations and does not have large-scale production facilities. The institute focuses on R&D technology validation and its transfer of technology to industry. The Institute only operates a small pilot plant facility to establish the semi-commercial feasibility of developed technologies. The bulk production and commercialization are done by the industry after technology transfer.

28. When asked to state that whether it can be said the size of IPFT is very small as compared to its objectives and mandate and what was the opinion of IPFT, the Department of Chemicals and Petrochemicals submitted that the main objective of the Institute was only in the area of formulations development for the Pesticides Industry. IPFT was carrying out the tasks as per the mandate assigned to it. There was also presence of Research facilities in this area in Private sector. However, based on the emerging needs of the sector in future if any, the capacity of the Institute can be strengthened.

### Annexure

Details furnished by the Department regarding Farmers awareness programmes conducted by IPFT during the last three years and the current year to create awareness among the farmers about the use of the pesticides

Sr. No.	Date	Place	Title of Workshop
1	17 February 2023	Nimpith, West Bengal	Promotion of the Use of Botanical Pesticides Based on Locally Available Resources/Plants in Zero Budgeting Organic Farming for Crop Protection and Enhancing Crop Productivity (for Farmers)
2	28 February 2023	Bharatpur, Rajasthan	
3	25 March 2023	Golaghat, Assam	
4	27 March 2023	Morigaon, Assam	
5	28 March 2023	Karoli, Rajasthan	
6	18 November 2023	Rewari, Haryana	
7	19 November 2023	Kosli, Haryana	
8	1 December 2023	Wazirpur, Gangapur City, Rajasthan	
9	2 December 2023	Bandhua, Hindaun, Rajasthan	
10	10 December 2023	Srikalahasthi, Andhra Pradesh	
11	12 December 2023	Guntur, Andhra Pradesh	
12	17 December 2023	Bhograi, Odisha	
13	19 December 2023	Olmara, Odisha	
14	23 January 2024	Jabalpur, Madhya Pradesh	
15	5 March 2024	Mandla, Madhya Pradesh	

Sr. No.	Date	Place	Title of Workshop
1	19 November 2022	Ratnagiri, Maharashtra	Safe and Judicious Use of Pesticides and Application of New Generation Formulation for Crop Protection in Vegetable Crops (for Farmers)
2	9 December 2022	Varanasi, UP	
3	15 January 2023	Rewari, Haryana	
4	17 January 2023	Venkataramannagudem, A.P.	
5	21 January 2023	Jaleshwar, Odisha	

6	9 February 2024	Eluru, Andhra Pradesh	
7	12 February 2024	Leh, Ladakh	
8	14 February 2024	Kargil, Ladakh	
9	14 February 2024	Humnabad, Karnataka	
10	15 February 2024 (Morning)	Aurad (Kamala Nagar), Karnataka	
11	15 February 2024 (Evening)	Hulsoor, Karnataka	
12	26 February 2024	Howly, Assam	
13	27 February 2024	KVK Barpeta/Baksa, Assam	
14	20 March 2024	West Garo Hills, Meghalaya	
15	21 March 2024	Aizawl, Mizoram	
16	30 May 2024	IPFT, Gurugram	
17	18 February 2025	IPFT, Gurugram (for Ladakh farmers)	

## OBSERVATIONS/RECOMMENDATIONS

1. The Committee note that IPFT was established way back in the year 1991 as an Autonomous Institute under the Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers as the successor of Pesticide Development Program in India (PDPI), which was established in the year 1986 in collaboration with the Government of India by the United Nations Industrial Development Organization (UNIDO). As regards achieving goals and objectives by IPFT, the Committee note that since the inception of IPFT, it has developed 86 pesticide formulations, out of which 64 technologies have been transferred to Industries. The Committee also note that IPFT has *inter-alia* developed 47 new formulations besides engaging in other activities like conducting analytical studies, filing of Patents and Research Papers, etc. The Committee, however note with concern that IPFT had not fixed any periodic targets for development of pesticide formulation, quantum of new formulations for transferring them to Industries in the last 34 years of its functioning. The Committee further note that during the huge time period of 34 years of its functioning which spans more than three (03) decades IPFT has developed 86 pesticide formulations amounting to a meager 2.5 percent pesticides formulations per year. The Committee observe with dissatisfaction, the slow pace of IPFT and desire that they may be apprised about the precise reasons for non-fixation of yearly targets. The Committee recommend that IPFT should immediately review its functioning in consultation with the Department and bring forth initiatives for development of pesticide formulations at a faster pace as per the needs of the industries as well as farmer communities across the Country.

2. The Committee note that though IPFT is an autonomous body, the Department gives grants for salary, general expenditure and Capital expenditure. As regards reasons for the same the Committee were apprised that IPFT generates revenue through technology transfer, testing and analytical services, bio-efficacy etc. but it was dependent on the Department for Grants for meeting its expenditure of salary, general expenditure and capital expenditure. The Committee are of the considered view that IPFT being established way back in the year 1991 should have gained sufficient expertise in its field by now and reduce its dependency on the Department for meeting its expenditures. The Committee therefore desire that concrete steps should be initiated in this regard. The Committee may be apprised of the action taken in this regard by the IPFT and by the Department separately.

3. The Committee were informed that new generation pesticides formulation technologies, which are being developed by the IPFT are better than the conventional pesticides formulations containing large amount petroleum derived organic solvents and composed of fine dusty powders. The Committee, however note that price of new generation pesticide formulations depends on the type of pesticides, formulation technology, concentration and brand and the actual market price was determined by the industry partner, taking into account production cost, commercialization strategy and affordability for farmers. The Committee observe that the price fixation of new generation pesticide formulations, if left totally to the industry partner with IPFT having no say in this regard, may leave scope for manipulation by the industry partner. The Committee are of the considered view that the new generation pesticides formulation which are much better than the conventional pesticides formulations must reach farmers all across the country so that the benefits of

**new generation pesticides formulation developed by IPFT are reaped proportionately by one and all across the agriculture sector. The Committee desire that the IPFT and the Department work together in tandem and recommend that appropriate steps be taken for determination of reasonable prices for new generation pesticides formulation of IPFT so as to make it available to the farmers at affordable prices. The Committee may be apprised of the action taken in this regard.**

**4. As regards steps taken by the IPFT to make the farmers aware of its new generation pesticides formulation for agriculture management, the Committee note that the IPFT has initiated several steps which include Farmer Awareness Programmes, field demonstrations and training workshops etc. besides distribution of brochures, Manuals and translated materials in local languages for the purpose. The Committee, however desire that these steps initiated by IPFT for making farmers aware of its new generation pesticides formulations be further augmented through advertisements in news papers, TV channels, radio channels in English as well as regional languages. The Committee would like to be apprised of the steps taken by IPFT in this regard.**

**5. Noting the advantages of new generation pesticides formulations, the Committee specifically enquired regarding the impact of these new generation pesticides in enhancing production of wheat, paddy and other crops. The Department have, however merely submitted the names of technologies that have been found useful for wheat and paddy crops. The Committee, therefore, desire that they be apprised of the specific impact of new generation pesticides formulation in enhancing production of wheat, paddy and other crops.**

6. As regards new generation pesticides formulation for agriculture and as well as for household pest management and their pricing, the Committee were informed that IPFT was a Research and Development Institute focused on the development of pesticides formulation technologies and it does not engage in production or marketing of any of its formulations. The IPFT after development of formulations merely transfers the technologies to the industries for commercial production and marketing. The Committee are intrigued about the reasons restricting the IPFT for production and marketing of its formulations despite being in existence for 34 years. The Committee therefore, desired that IPFT come up with feasibility studies towards expanding its ventures for production as well as market its formulations in the coming future. The Committee note that as regards the size of IPFT, it is very small as compared to its objectives and mandate. IPFT has however submitted that based on the emerging needs of the sector, the capacity of IPFT can be strengthened. The Committee are of the considered view that it is high time for the IPFT to go for deep introspection for further strengthening its functions including mass production and marketing of its own products so that the institute can successfully compete with the private players in the market. The Committee would like to be apprised of the steps taken in this regard.

7. The Committee are happy to note that for promoting the safe use of pesticides, IPFT had initiated farmer awareness programmes. These programmes were statedly initiated in the year 2022-2023. The Committee further note that from the year 2022-2023 to 2024-2025, a total of 32 such programmes were conducted by IPFT where a total of just 9223 farmers participated in these programmes who provided positive feedback. The Committee find these figures grossly inadequate keeping in view the fact that

the farmers across the Country totals to more than 10 crores. The Committee, therefore, recommend that the IPFT and the Department come out with a roadmap to conduct such programmes periodically and to encourage more and more farmers to participate in them so that the benefits are reaped by all farmers across the nation.

8. The Committee are happy to note that generally positive response have been received from farmers towards new generation pesticides formulations for agriculture management. The Committee were apprised that farmers have appreciated safety and other aspects of new generation pesticides formulations especially bio-botanical, neem based and eco friendly products during field demonstrations and awareness programmes. According to the farmers, the effects of new generation pesticides formulations may be slower as compared to conventional pesticides but they recognize the long term benefit for crops and their fields. Against this backdrop, the Committee feel that IPFT becomes duty bound to educate the farmers regarding its new generation pesticides formulations and to make them popular amongst them. The Committee recommend that necessary steps be taken by the IPFT in this regard and utmost priority may be accorded to the matter.

9. The Committee note that IPFT at present has laboratories under its three divisions viz (i) Formulation division, (ii) Analytical division and (iii) Bio-Science division. The formulation division is stated to have laboratory set up for development of pesticides formulations for agricultural as well as household pest management and it also have pilot plant facility that can scale up lab scale research to a commercial production with optimum budget and it has capacity to produce upto 100 kg. per shift. Similarly the analytical division is accredited

and equipped with chemical testing of pesticides. The bio-science division is equipped to evaluate the different pesticides formulations by the IPFT or by the industry for their commercial viability through well equipped bio-assay laboratory, green house/ glass house and experimental field trials. Admittedly, IPFT has pilot plant facilities but was never utilized for commercial production. The Committee deplore the same and recommend that the IPFT should initiate ameliorative steps for full capacity utilization of its installed capacities in so far as plants and laboratories are concerned. To this extant, the Committee desire that appropriate monitoring mechanism be put in place to ensure optimum capacity utilisation of IPFT infrastructure.

10. The Committee note that 05 Scientific Posts are vacant at present in the IPFT out of which Offer Letters for 02 posts to join have been issued by the IPFT and 03 posts remain vacant for which recruitment process was under progress. The Committee desire that the recruitment process be expedited and the vacant posts be filled up at the earliest so as to further enhance the efficiency of IPFT.

11. The Committee note that since inception of the IPFT, it has developed 86 pesticides formulations out of which, only 64 technologies have been transferred. A total of 22 pesticides formulations could not be transferred according to IPFT. Statedly, the market for bio based formulations was not very robust at present and even if IPFT was not able to transfer such formulations, they will be transferred in future once the market for bio based pesticides picks up. The Committee are not satisfied with the submission of the IPFT. The Committee observed that the reasons for non-transfer of its 22 pesticides formulations needs to be analyzed in a professional manner and IPFT need to work on the development of further formulations keeping in view the needs of

the industry and the farmers. The Committee would like to be apprised of the steps taken in this regard.

12. The Committee also note that IPFT had developed 47 formulations out of which just 16 formulations could be transferred and 31 formulations could not be transferred. The Committee were apprised that for 31 formulations, the data generation as per regulatory requirement has to be done and studies are in progress for 19 formulations. Further, the IPFT is making efforts for publicizing these formulations through industry needs. The Committee desire that appropriate steps be taken so that the studies initiated in this regard be expedited.

**NEW DELHI;  
06 JANUARY, 2026  
16 PAUSA, 1947 (Saka)**

**AZAD KIRTI JHA  
CHAIRPERSON,  
STANDING COMMITTEE ON  
CHEMICALS AND FERTILIZERS.**

**STANDING COMMITTEE ON CHEMICALS AND FERTILIZERS**

**(2024-25)**

**Minutes of the Twenty Eighth Sitting of the Committee**

The Committee sat on Monday, the 08<sup>th</sup> September, 2025 from 1100 hrs. to 1300 hrs. in Committee Room 'D', Parliament House Annexe, New Delhi.

**PRESENT**

**Shri Azad Kirti Jha – Chairperson**

**LOK SABHA MEMBERS**

2. Shri Brijmohan Agrawal
3. Shri Ajay Bhatt
4. Shri Robert Bruce C.
5. Shri Bharatsinhji Shankarji Dabhi
6. Dr. Kalyan Vaijinathrao Kale
7. Shri Malvinder Singh Kang
8. Shri Babu Singh Kushwaha
9. Shri Praveen Patel
10. Shri Balram Naik Porika
11. Shri Sachithanantham R.
12. Shri Eatala Rajender
13. Shri Rajesh Ranjan
14. Shri Daggumalla Prasada Rao
15. Shri Tharaniventhan M.S.
16. Shri Nalin Soren
17. Dr. Ricky Andrew J. Syngkon
18. Shri Shivmangal Singh Tomar

**RAJYA SABHA SECRETARIAT**

19. Shri Subhash Barala
20. Dr. Bhagwat Karad
21. Shri Subhash Chandra Bose Pilli
22. Shri Naresh Bansal
23. Shri Sanjay Raut
24. Shri Meda Raghunadah Reddy
25. Dr. Kalpana Saini
26. Shri Arun Singh
27. Shri Akhilesh Prasad Singh
28. Shri Tejveer Singh

## **SECRETARIAT**

- |                         |   |                  |
|-------------------------|---|------------------|
| 4. Smt. Maya Lingi      | - | Joint Secretary  |
| 5. Ms. Miranda Ingudam  | - | Director         |
| 6. Shri Kulvinder Singh | - | Deputy Secretary |

## **WITNESSES**

### **Representatives of the Ministry of Chemicals and Fertilizers, Department of Chemicals and Petrochemicals:**

1. Ms. Nivedita Shukla Verma, Secretary (C&PC)
2. Shri Deepak Mishra, Joint Secretary, Petrochemical
3. Shri Deepankar Aron, Joint Secretary, Chemical
4. Ms Divya Parmar, Economic Advisor, DCPC
5. Ms. Vandana, Director, DCPC
6. Shri Chandan Kumar, Under Secretary, DCPC
7. Shri Chitvan Singh Dhillon, Dy Director, DCPC

### **Representatives of IPFT**

1. Dr. Mohana Krishna Reddy Mudiam, Director, IPFT
2. Dr. Amrish Agarwal, Specialist (Formulation), IPFT
3. Dr. Deepak Kumar Jaiswal, Specialist (Bioscience), IPFT
4. Dr. Samsul Alam, Specialist (Analytical), IPFT

2. At the outset, the Chairperson welcomed the Members of the Committee and the representatives of the Ministry of Chemicals and Fertilizers Department of Chemicals and Petrochemicals to the Sitting of the Committee convened for briefing on the subject "Review of the functioning of Institute of Pesticide Formulation Technology (IPFT)". Drawing the attention of the representative to Direction 55(1) of the 'Directions by the Speaker' regarding confidentiality of the proceedings of the Committee, the Chairperson asked the Secretary to apprise the Committee regarding IPFT. The Secretary, DCPC accordingly briefed the Committee through Power point presentation about establishment of IPFT in the year 1991; Funds allocated to IPFT during the financial years 2022-23, 2023-24 and 2024-25, objectives, activities and

achievements of IPFT during the last six year; Publications and Patents filed with and other achievements of IPFT; and development of user and environment friendly new generation formulations of pesticides as well as development of bio- botanical pesticide formulations which are safer and green alternative to synthetic pesticides. The Committee were also apprised that IPFT has been developing formulation and also transferring it to *various industries viz. UPL Ltd, JU Agri Sciences UNIDO, IFFCO-MC etc.* In the Biosciences field, IPFT have been carrying out trails on various crops like Potato, Sugarcane, Wheat, etc. and a total no. of 115 trials have been completed by the IPFT on various crops.

3. As regards future plans of IPFT, the Committee were apprised that it includes *inter-alia* Recognition of IPFT as a referral testing laboratory to analyze biostimulants as per Fertilizer Control Order guidelines; Development of pesticide formulations and bio-botanical pesticide formulations as safer alternative to synthetic pesticides ; Development of EcoTox facility at IPFT as per OECD-GLP principles ;Establishment of NABL accredited facility for development of Certified Reference Materials (CRMs) for Pesticides as per ISO 17034 at IPFT; Initiate PhD-level programs in collaboration with academic institutions;

4. The Chairperson thanked the Secretary, DCPC and the accompanying Officers for briefing the Committee on the important aspects relating to the subject and asked them to furnish written replies to points raised by the members that remained unanswered, at the earliest.

(The witnesses then withdrew)

***The Committee then adjourned.***

[A verbatim record of the proceedings has been kept on record]

**STANDING COMMITTEE ON CHEMICALS AND FERTILIZERS BRANCH**

**(2025-26)**

**Minutes of the Ninth Sitting of the Committee**

The Committee sat on Tuesday, the 06<sup>th</sup> January, 2026 from 1100 hrs. to 1130 hrs. in Committee Room 'B', Parliament House Annexe (PHA), New Delhi.

**PRESENT**

**Shri Azad Kirti Jha– Chairperson**

**LOK SABHA MEMBERS**

2. Shri Brijmohan Agrawal
3. Shri Ajay Bhatt
4. Shri Robert Bruce C.
5. Shri Bharatsinhji Shankarji Dabhi
6. Dr. Kalyan Vaijinathrao Kale
7. Shri Malvinder Singh Kang
8. Shri Praveen Patel
9. Dr. Sambit Patra
10. Shri Balram Naik Porika
11. Shri Sachithannatham R.
12. Shri Eatata Rajender
13. Shri Rajesh Ranjan
14. Shri Daggumalla Prasada Rao
15. Shri Shivmangal Singh Tomar

**RAJYA SABHA MEMBERS**

16. Shri Subhash Barala
17. Shri Rwngrwa Narzary
18. Shri Subhash Chandra Bose Pilli
19. Shri Akhilesh Prasad Singh
20. Shri Tejveer Singh
21. Shri G.K. Vasani

## SECRETARIAT

- |                         |   |                  |
|-------------------------|---|------------------|
| 7. Smt. Maya Lingi      | - | Joint Secretary  |
| 8. Ms. Miranda Ingudam  | - | Director         |
| 9. Shri Kulvinder Singh | - | Deputy Secretary |
| 10. Shri Abhishek Kumar | - | Deputy Director  |

2. At the outset, the Chairperson welcomed the Members to the sitting of the Committee. Thereafter, the Committee took up for consideration, the following Draft Reports:

- |      |   |     |     |     |
|------|---|-----|-----|-----|
| i.   | XXX   | XXX | XXX | XXX |
| ii.  | XXX   | XXX | XXX | XXX |
| iii. | XXX   | XXX | XXX | XXX |
| iv.  | Nineteenth Report on the subject 'Review of the functioning of Institute of Pesticide Formulation Technology (IPFT)' pertaining to the Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers. |     |     |     |

3. Giving an overview of the important Observations/Recommendations contained in the draft Reports, the Chairperson solicited the views/suggestions of the Members.

4. After some deliberations, the draft Reports were adopted by the Committee without any amendment.

5. The Committee then authorized the Chairperson to finalize the Reports and present/lay the Reports in both the Houses of Parliament in the budget session of Parliament.

***The Committee then adjourned.***