

# राष्ट्रीय वनस्पति स्वास्थ्य प्रबंधन संस्थान

# National Institute of Plant Health Management

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Promoting Plant Health Management since 2008 ...

**Quarterly Plant Health** 

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# **NEWS LETTER**

# THEME ARTICLE





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# SPECIAL EVENTS







In today's interconnected world, the intricate web of global trade, travel, and climate change is redefining our understanding of agricultural sustainability and resilience. While these dynamics open avenues for economic growth, they also pose complex challenges—chief among them being the increasing risk of pest invasions and biological threats to our crops and ecosystems. In this context, plant biosecurity has emerged not only as a critical scientific domain but as a cornerstone of national and global food security, trade integrity, and environmental protection.

The Role of Plant Biosecurity, SPS Measures, and the One Health Approach is the growing need for integrated, multi-sectoral strategies to combat the spread of invasive alien species. It articulates how plant biosecurity, aligned with the WTO's Sanitary and Phytosanitary (SPS) Agreement and guided by the standards set forth by the IPPC and its regional bodies, forms a formidable front against emerging phytosanitary threats.

Plant biosecurity within the One Health framework recognizing that plant, animal, human and environmental health is intrinsically linked. By safeguarding crops, we not only secure food systems and livelihoods but also minimize pesticide overuse, protect biodiversity, and strengthen climate resilience.

At the National Institute of Plant Health Management (NIPHM), we are proud to contribute to this mission. Through cutting-edge training programs, online courses, research, and international collaborations, NIPHM has been at the forefront of capacity building and policy advocacy in plant protection and biosecurity. Our emphasis on education and awareness particularly among youth and professionals—aims to cultivate a biosecurity culture that is proactive, informed, and future-ready.

As the global agriculture landscape evolves, so must our response mechanisms. I call upon all stakeholders—researchers, policy makers, industry leaders, and citizens—to join hands in strengthening our plant biosecurity systems. Let us move forward with unity of purpose and scientific rigor to build a resilient agricultural future for India and the world.

आज के परस्पर जुड़े विश्व में वैश्विक व्यापार, यात्रा और जलवायु परिवर्तन की जटिल संरचना कृषि की स्थिरता और लचीलापन की हमारी समझ को पुनर्पिरभाषित कर रही है। जहां एक ओर ये बदलाव आर्थिक विकास के नए मार्ग खोलते हैं, वहीं दूसरी ओर ये फसलों और पारिस्थितिकी तंत्र पर कीट आक्रमण और जैविक खतरों के बढ़ते जोखिम जैसी जटिल चुनौतियाँ भी प्रस्तुत करते हैं। ऐसे परिप्रेक्ष्य में, **पादप जैव-सुरक्षा** न केवल एक महत्वपूर्ण वैज्ञानिक क्षेत्र के रूप में उभरी है, बल्कि यह राष्ट्रीय और वैश्विक खाद्य सुरक्षा, व्यापार की विश्वसनीयता और पर्यावरणीय संरक्षण का आधारस्तंभ बन गई है।

पादप जैव-सुरक्षा, एसपीएस उपायों और "वन हेल्थ" दृष्टिकोण की भूमिका इस बात की आवश्यकता को रेखांकित करती है कि कैसे समन्वित और बहु-क्षेत्रीय रणनीतियाँ आक्रामक विदेशी प्रजातियों के प्रसार को रोकने में प्रभावी हो सकती हैं। यह स्पष्ट रूप से बताता है कि पादप जैव-सुरक्षा को डब्ल्यूटीओ के सेनिटरी और फाइटोसैनिटरी (SPS) समझौते के अनुरूप और अंतरराष्ट्रीय पादप संरक्षण संधि (IPPC) तथा उसके क्षेत्रीय संगठनों द्वारा निर्धारित मानकों के मार्गदर्शन में अपनाना कितना आवश्यक है।

"वन हेल्थ" रूपरेखा के भीतर पादप जैव-सुरक्षा यह मान्यता देती है कि पौधों, पशुओं, मनुष्यों और पर्यावरण का स्वास्थ्य आपस में गहराई से जुड़ा हुआ है। जब हम अपनी फसलों की रक्षा करते हैं, तो हम न केवल खाद्य प्रणाली और आजीविका को सुरक्षित करते हैं, बल्कि कीटनाशकों के अत्यधिक उपयोग को भी कम करते हैं, जैव विविधता की रक्षा करते हैं, और जलवायु लचीलापन को भी सुदृढ़ करते हैं।

राष्ट्रीय पादप स्वास्थ्य प्रबंधन संस्थान (NIPHM) इस मिशन में गर्व के साथ अपना योगदान दे रहा है। अत्याधुनिक प्रशिक्षण कार्यक्रमों, ऑनलाइन पाठ्यक्रमों, अनुसंधान और अंतरराष्ट्रीय सहयोग के माध्यम से, संस्थान पादप संरक्षण और जैव-सुरक्षा के क्षेत्र में क्षमता निर्माण और नीतिगत मार्गदर्शन के अग्रणी केंद्र के रूप में कार्य कर रहा है। युवाओं और पेशेवरों में शिक्षा और जागरूकता पर हमारा विशेष जोर एक ऐसी जैव-सुरक्षा संस्कृति विकसित करने का प्रयास है जो सक्रिय, सूचित और भविष्य के लिए तैयार हो।

जैसे-जैसे वैश्विक कृषि परिदृश्य बदल रहा है, वैसे-वैसे हमारी प्रतिक्रिया प्रणाली को भी विकसित होना चाहिए। मैं सभी हितधारकों—शोधकर्ताओं, नीति निर्माताओं, उद्योग जगत के नेताओं और नागरिकों—से आह्वान करता हूँ कि वे हमारी पादप जैव-सुरक्षा प्रणाली को सशक्त बनाने के लिए एकजुट हों। आइए हम एकजुट उद्देश्य और वैज्ञानिक दृष्टिकोण के साथ आगे बढ़ें ताकि भारत और समूचे विश्व के लिए एक लचीला और स्थायी कृषि भविष्य सुनिश्चित किया जा सके।

(Dr. Sagar Hanuman Singh IPoS) Director General



# STRENGTHENING GLOBAL AGRICULTURE: THE ROLE OF PLANT BIOSECURITY, SPS MEASURES, AND THE ONE HEALTH APPROACH

Dr. Chandra Shekhar Gupta, Scientific Officer-PRA; Dr. Jyoti Bhardwaj, Scientific Officer-PRA and Dr. C Alice R. P. Sujeetha, Director- Plant Biosecurity

### Introduction

In an era of unprecedented globalization, international trade, travel, and tourism have transformed the global economy and societies. However, they also serve as vectors for the unintentional movement of invasive alien species (IAS), threatening global agriculture, food security, biodiversity, and public health. As pest incursions increase across borders, plant biosecurity has emerged as a crucial defense mechanism. A holistic, integrated approach rooted in plant health measures, Sanitary and Phytosanitary (SPS) frameworks, and the One Health concept is essential to manage and mitigate these threats.

# **Understanding Plant Biosecurity**

Plant biosecurity is a strategic and integrated approach to analyzing and managing risks to plant life and health. It is essential for protecting agricultural resources, native ecosystems, and trade. The concept encompasses measures to prevent the introduction and spread of harmful pests, weeds, and diseases affecting crops, forests, and biodiversity.

With the increased movement of agricultural goods, the risk of biological invasions has surged. These incursions can devastate local agriculture and ecosystems, as seen in historical events such as:

- The Irish Potato Famine (1845–1852) caused by the late blight pathogen *Phytophthora infestans*, which led to massive famine and migration.
- Collapse of the European Grapevine Industry due to the introduction of powdery mildew (*Oidium tuckeri*), Phylloxera (*Phylloxera vastatrix*), and downy mildew (*Plasmopara viticola*) through imported vines.

These examples highlight the urgency of a structured global biosecurity system, as modern agriculture continues to face similar threats.

The SPS Agreement and "Three Sisters" of Global Biosecurity

The **Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)** under the World Trade Organization (WTO) provides a framework for countries to protect human, animal, and plant health without unnecessarily restricting trade.

#### The Three Sisters of SPS:

- 1. Codex Alimentarius Commission (CAC) Focuses on food safety.
- 2. World Organization for Animal Health (WOAH, formerly OIE) Addresses animal health and zoonoses.



3. **International Plant Protection Convention (IPPC)** – Develops International Standards for Phytosanitary Measures (ISPMs) to manage plant health.

The IPPC, headquartered at FAO in Rome, is an international treaty with 185 member countries (as of 2025). It promotes global cooperation through:

- ISPM Development
- Information Exchange, and
- Technical Assistance and Capacity Building.



**'Harmonisation - WTO** Members shall base their SPS measures on international stds, where they exist'

### Plant Biosecurity and One Health

The **One Health** approach recognizes the interconnectedness of human, animal, and environmental health. In the context of plant biosecurity:

- Healthy crops mean food security and economic stability.
- Preventing the spread of invasive pests reduces the need for pesticide use, protecting ecosystems and public health.
- Managing agricultural biosecurity contributes to climate resilience and sustainability.

Thus, integrating plant biosecurity into One Health frameworks enhances the overall capacity to address cross-sectoral risks.



### **Biosecurity Risk Analysis**

Effective plant biosecurity depends on robust risk analysis:

- 1. **Risk Assessment** Identification of potential pest threats.
- 2. **Risk Management** Designing strategies such as pest-free zones, phytosanitary treatments, or import restrictions.
- 3. **Risk Communication** Engaging trading partners and stakeholders to ensure transparency and compliance.

# **National and Regional Coordination**

**Role of National Plant protection Organization (NPPOs)** 

## The NPPO in each country is responsible for:

- Issuance of Phytosanitary Certificates
- Reporting the occurrence, outbreak and spread of pests
- Inspecting consignments of plant and plant products and other regulated items
- Managing treatments related to plant health (either disinfections or disinfestations) of consignments
- Surveillance and maintenance of pest free areas and areas of low pest prevalence
- Conducting pest risk analyses
- Ensuring the maintenance of phytosanitary security of consignments after certification.
- Staff training and development
- Reporting any changes in its organizational structure, regulations and other phytosanitary issues.

The NPPOs are representatives of the Contracting Parties to the IPPC and therefore responsible for organizing and undertaking the consultation process and preparation for meetings in such a way that national positions are the result of open and transparent discussion among all public and private stakeholders with expertise on the issue.

NPPOs' Contact Point – Joint Secretary (Plant Protection), MoA&FW, Govt. of India



#### The Contact Point should

- Be an expert on phytosanitary issues relating to his country.
- Provide status reports as a member of the CPM and be aware of related issues of concern and significance.
- Coordinate contributions necessary for the development of International Standards for Phytosanitary Measures (ISPM).
- Respond to the requests of other members to the best of his ability.
- Help ensure that stakeholders are aware of IPPC standards.
- Coordinate, train and provide support to enable NPPO compliance with the requirements of the IPPC.
- Redirect all requests for phytosanitary information from contracting parties and the IPPC to relevant officials.
- Track the status of responses to information requests.

### **Regional Plant Protection Organization (RPPO)**

A Regional Plant Protection Organization (RPPO) is an inter-governmental organization functioning as a coordinating body for National Plant Protection Organizations (NPPO) on a regional level. Not all contracting parties to the IPPC are members of RPPOs, nor are all members of RPPOs contracting parties to the IPPC. Moreover, certain contracting parties to the IPPC belong to more than one RPPO.

### There are currently 10 RPPOs:

- I. Asia and Pacific Plant Protection Commission (APPPC)
- II. Caribbean Agricultural Health and Food Safety Agency (CAHFSA)
- III. Comunidad Andina (CAN)
- IV. Comite de Sanidad Vegetal del Cono Sur (COSAVE)
- V. European and Mediterranean Plant Protection Organization (EPPO)
- VI. Inter-African Phytosanitary Council (IAPSC)
- VII. Near East Plant Protection Organization (NEPPO)
- VIII. North American Plant Protection Organization (NAPPO)
- IX. Organismo Internacional Regional de Sanidad Agropecuaria (OIRSA)
- X. Pacific Plant Protection Organization (PPPO)

Article IX of the IPPC provides for RPPO contributions to various activities that achieve the objectives of the IPPC. It extends the responsibilities of RPPOs to specify cooperation with the IPPC Secretariat and the Commission for Phytosanitary Measures in developing international standards. The RPPOs therefore play an important role in the cooperative endeavour to implement the IPPC.

### The functions of RPPOs are mostly laid down in the Article IX of the IPPC and include:

- Coordination and participation in activities among their NPPOs in order to promote and achieve the objectives of the IPPC
- Cooperation among regions for promoting harmonized phytosanitary measures
- Gathering and dissemination of information, in particular in relation with the IPPC
- Cooperation with the CPM and the IPPC Secretariat in developing and implementing international standards for phytosanitary measures.



### **Threats and Challenges**

The "Four Ts" — **Trade, Transport, Travel, and Tourism** — have significantly increased pest introductions. Emerging challenges include:

- Lack of awareness and preparedness in developing countries,
- Weak surveillance and quarantine systems,
- Rapid adaptation of pests to new environments.



The **ISSG** (**Invasive Species Specialist Group**) of IUCN has listed the top 100 worst invasive alien species, signaling the need for proactive biosecurity measures.

Integrated and Cross-sectoral Biosecurity

A unified biosecurity system delivers multiple benefits:

- **Agricultural productivity** increases with healthy crops.
- **Public health** improves with reduced pesticide exposure.
- **Trade** expands under reliable and safe systems.
- Environmental sustainability is achieved by protecting native biodiversity and reducing chemical use.

This integrated approach not only manages risks but also supports economic development and food sovereignty.

### **Need for Education and Awareness**

Creating a culture of biosecurity requires investment in education. Integrating biosecurity into academic curricula and organizing awareness programs such as seminars, webinars, and workshops is essential. Engaging students and professionals early fosters long-term vigilance and innovation in pest prevention.



### **Key Contributions of NIPHM in Plant Biosecurity:**

### 1. Capacity Building and Training:

- Educational Programs: NIPHM offers various training programs in biosecurity management, plant quarantine, and sanitary and phytosanitary (SPS) issues to effectively tackle challenges arising from the globalization of trade in agriculture. These programs are designed to enhance technical capabilities and human resource development in plant biosecurity.
- Massive Open Online Courses (MOOCs): The institute provides online courses in plant biosecurity, aiming to create awareness about plant quarantine systems, combat invasive plant pest threats, and enhance SPS compliance.

### 2. Research and Development:

• NIPHM conducts surveys and studies to monitor insect pests and natural enemies associated with major crops. For instance, surveys in Rangareddy district, Telangana, focused on pest incidence in vegetable crops, contributing to the development of effective pest management strategies.

#### 3. International Collaboration:

 The institute collaborates with international organizations such as the United States Department of Agriculture (USDA) to strengthen training, research, and policy issues in plant health management and biosecurity. This includes organizing international capacity-building programs and developing work plans for collaborative activities.

### 4. Policy Development:

- NIPHM provides inputs for policy formulation on plant health management, plant biosecurity, invasive alien species, market access, and pesticide management at state and national levels.
- Through these initiatives, NIPHM significantly contributes to strengthening India's plant biosecurity system, ensuring sustainable agricultural practices, and facilitating safe international trade.

#### **Need for Education and Awareness**

Creating a culture of biosecurity requires investment in education. Integrating biosecurity into academic curricula and organizing awareness programs such as seminars, webinars, and workshops is essential. Institutions like NIPHM play a vital role in sensitizing future professionals and stakeholders.

### Conclusion

Plant biosecurity is not just a protective mechanism—it is a cornerstone of resilient and sustainable agriculture. In a world increasingly shaped by global trade and environmental change, coordinated efforts at the international, regional, and national levels are vital. The synergy of SPS measures, IPPC frameworks, and the One Health approach—complemented by the leadership of institutions like NIPHM—ensures a future where agriculture can thrive without compromising human, animal, or ecosystem health.



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### **Around the World**

### **Commission on Phytosanitary Measures (CPM-19)**

The **19th Session of the Commission on Phytosanitary Measures** (**CPM-19**) convened from **17–21 March 2025** at the Food and Agriculture Organization (FAO) Headquarters in Rome, Italy. This annual gathering of the International Plant Protection Convention (IPPC) contracting parties focused on advancing global plant health initiatives and addressing emerging phytosanitary challenges.

### **Key Highlights from CPM-19:**

### > Development of a New International Standard for Humanitarian Aid:

CPM-19 approved the draft specification for a new International Standard for Phytosanitary Measures (ISPM) titled "Safe Provision of Humanitarian Aid in the Phytosanitary Context." This initiative aims to ensure that humanitarian aid does not inadvertently introduce or spread plant pests, aligning with the principle of "do no harm." The standard will provide guidance to National Plant Protection Organizations (NPPOs) and aid agencies on implementing phytosanitary measures during the delivery of humanitarian assistance.

### **➤** Addressing Climate Change Impacts on Plant Health:

The CPM Focus Group on Climate Change and Phytosanitary Issues presented a technical resource titled "Climate-change impacts on plant pests: a technical resource to support national and regional plant protection organizations." This document aims to assist NPPOs and Regional Plant Protection Organizations (RPPOs) in understanding and mitigating the effects of climate change on plant pests. Additionally, a series of webinars on "Climate Change and Phytosanitary Measures" were conducted, engaging approximately 1,500 participants globally.

### > Strengthening Pest Outbreak Alert and Response Systems (POARS):

The POARS Steering Group developed criteria for identifying emerging pests and established an alert system to enhance prevention, preparedness, and response strategies. A pilot initiative for POARS was launched, focusing on collaborative efforts to manage pest outbreaks effectively.

#### **Engagement with International Organizations:**

The International Grain Trade Coalition (IGTC) reported on its activities, emphasizing advocacy for trade-enabling policies and the advancement of digital trade solutions like electronic phytosanitary certificates (ePhyto). The IGTC highlighted collaborations with international institutions and participation in global events to promote efficient and predictable grain trade.



# **Training Programs**

# **Plant BioSecurity Division**

The Plant Biosecurity Division has organized following training programmes during the months of **July-September**, **2025**.

# **Capacity Building Programmes:**

S. No.	Name of The Programme	Duration	Date		
			From	То	
	Plant Biosecurity Division (PBD)	l	1		
1)	Phytosanitary Inspection Training for Phytosanitary Service Agency and Phytosanitary Service Provider for Inspection of Plants/ Plant Products & other Regulated Articles in Export	30 Days	01.07.2025	30.07.2025	
2)	Training on Non-Insect Pest Management – Mites, Crabs, Slugs, Snails and Avian (Online)	03 Days	02.07.2025	04.07.2025	
3)	Training on "Scientific Beekeeping	07 Days	02.07.2025	08.07.2025	
4)	Pest Surveillance techniques for Horticulture and Agriculture crops"	03 Days	07.07.2025	09.07.2025	
5)	Workshop on Urban Pest Management at Lucknow in association with Arbuda Agro chemicals	01 Day	09.07.2025	09.07.2025	
6)	Workshop on Urban Pest Management at Mumbai in association with Arbuda Agro chemicals on 16.07.2025	01 Day	16.07.2025	16.07.2025	
7)	Forced Hot Air Treatment	01 Day	28.07.2025	01.08.2025	
8)	Detection and Identification of Pests (Insects, Pathogens, Weeds and Nematodes)	05 Days	04.08.2025	08.08.2025	
9)	Online Digital Tools in Plant Protection for Pest Surveillance Techniques for Agricultural and Horticultural Crop Pests	03 Days	18.08.2025	20.08.2025	
10)	UIPM	24 Day	06.08.2025	28.08.2025	
11)	Fumigation training for field technicians from	03 Days	11.08.2025	13.08.2025	



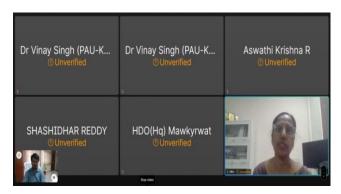
		05 Days	T	
12)	,		19.08.2025	21.08.2025
	sustainable management of Agriculture and			
	Horticulture crops			
13)	Certificate course on 'Urban Integrated Pest	15 Days	01.09.2025	15.09.2025
	Management			
14)	Diagnosis of Pests, Pest Risk Analysis, Pest	14 Days	03.09.2025	16.09.2025
	Surveillance and Phytosanitary Treatments for			
	Safe Trade (ITEC)			
15)	Aluminum phosphide (AIP) Fumigation	15 Days	03.09.2025	17.09.2025
,	Training (Karnataka Seeds)	_		
16)	Rodent Pest Management	05 Days	08.09.2025	12.09.2025
17)		01 Day	10.00.2025	
1/)	workshop on upskilling in urban pest		19.09.2025	
	management at Surat, Gujarat			
	FARMERS PRO	OGRAMME		
	WDRA Sponsored Programme			
18)	WDRA and KVK Jammikunta conducted	01	18.07.2025	18.07.2025
	Farmers Awareness			
19)	WDRA at Siddipet and eNWR conducted for	01	05.08.2025	
	farmers of Siddipet district at CW, Siddipet			
20)	WDRA at Ramchandrapur(V)	01	22.08.2025	
	Sidhapur(M) Karimnagar(D)			
21)	WDRA and eNWR conducted for farmers of	01	16.09.2025	
	Wanaparthy			
22)	PACS Chandupatla to organize FAP WDRA	01	19.09.2025	

#### **DETAILS OF TRAINING PROGRAMMES**

Phytosanitary Inspection Training for Phytosanitary Service Agency and Phytosanitary Service Provider for Inspection of Plants/ Plant Products and other Regulated Articles in Export - One month training programme from 01.07.2025 to 30.07.2025 was organised to impart the technical skills and competency to perform phytosanitary inspection and certification in compliance of NSPM-23. The training enabled the participants (06 Nos.) to acquire technical skills and competency in performance of phytosanitary inspection for export consignments of plants/plant products and other regulated articles meeting the phytosanitary requirements of importing country and there by fulfilling the international obligations under IPPC the International Plant Protection Convention (IPPC) and WTO-SPS Agreement.



Non-Insect Pest Management – Mites, Crabs, Snails, Slugs and Avians: The 03 day's online program was organized during 02.07.2025 to 04.07.2025 with an objective to create awareness on important pests in Agriculture, Horticulture and allied sectors causing huge losses to farmers. Total 20 officers attended the program.



Scientific Beekeeping –The 7 day's training programme was organised at NIPHM from 02.07.2025 to 08.07.2025 which was sponsored by MANAGE under National Bee Board under Mini Mission-1 (NBHM) Ministry of Agriculture & Farmers Welfare, Govt. of India. The objective of this course is to provide learners with scientific knowledge and hands-on training in modern beekeeping practices. Total 25 of rural unemployed youths, FPOs and farmers are attended the programme





- ➤ Pest Surveillance techniques for Horticulture and Agriculture crops: One 03 day's training programme was organized during 07.07.2025 to 09.07.2025, with an objective to create awareness on various pest surveillance strategies such as detection, monitoring and delimiting surveys. Total 14 officers attended the program.
- ➤ One day workshop on "Urban Pest Management"- was organised by NIPHM at Hotel Fortune, Lucknow (UP) on 09.07.2025 in association with Arbuda Agro Chemicals on consultancy basis. Total 87 pest management professionals from UP were attended the workshop. The participants learnt about major rodent pests and their management in Urban environment, Safety trends in urban pest management, chemicals for urban pest management and safe handling and spraying techniques of chemicals in urban areas.





➤ One day workshop on "Urban Pest Management" was organised by NIPHM at Novotel, Mumbai (East Anderi) on 16.07.2025 in association with Arbuda Agro Chemical Ltd on consultancy basis. Total 245 pest management professionals attended the training. The participants learnt about major rodent pests and their management in Urban environment, Safety trends in urban pest management, cockroach Management, safe handling of pesticides and urban equipment's.





➤ **Forced Hot Air Treatment**: One 5 day's training programme for industry stakeholders was organized from 28.07.2025 to 01.08. 2025 and attended by 20 participants. The participants learnt the critical requirements for establishing FHAT facilities, calibration of sensors, placement of sensor, identification of coolest point, safety precautions, conducting the treatments, use of appropriate mark and record keeping in accordance with ISPM – 15 and NSPM – 9.





➤ Detection and Identification of Pests (Insects, Pathogens, Weeds and Nematodes): One 5 day's programme was organized to train the officers with the techniques and tools for detection and identification of the pests from 04.08.2025 to 08.08.2025 at NIPHM. Total 07 participants from Andhra Pradesh and Telangana were attended the programme.



➤ Online Digital Tools in Plant Protection for Pest Surveillance Techniques for Agricultural and Horticultural Crop Pests: One 3 day's online programme was organized from 18.08.2025 to 20.08.2025, wherein 22 participants attended the training program. This training programme was focused to build the capacities of plant protection professionals by equipping them with knowledge and skills in the use of digital surveillance tools and modern ICT applications for pest detection and monitoring.



➤ **Urban Integrated Pest Management**: The 15 day's training programme was organized from 06.08.2025 to 20.08.2025 and attended by total of 58 participants. This programme provided an opportunity to develop skills about urban pest's biology, bionomics and management practices and prepares the participants for emergency preparedness to prevent the outbreak of communicable zoonotic diseases, to develop skills in safe use of chemical pesticides.



Fumigation Training for Field Technicians: One 03 day's training programme was organised from 11.08.2025 to 13.08.2025 for fumigation field technicians The course was designed to build a strong foundation of knowledge and practical skills for carrying out fumigation treatments safely, effectively, and in full compliance with national and international phytosanitary standards. The 5 participants were attended the said program on payment basis and they were well equipped to conduct fumigation operations with proficiency, safety, and accountability.





Establishment of Plant Health Clinic for Sustainable Management of Agricultural and Horticultural crops: One 03 day's training programme was organized from 19.08.2025 to 21.08.2025. Participants(13) learnt about Importance, Requirements and operationalization of PHCs, pest surveillance strategies such as detection, monitoring, types of surveys, sampling methods to adopt at field level, Soil health techniques, The tools required for surveillance of target pests has been covered during the programme.





➤ Certificate course on Urban Integrated Pest Management- A 15 day's programme was organized for the structural pest management professionals from 01.09.2025 to 15.09.2025 at NIPHM. Total 30 participants attended the course from various states. The participants gained insights on ecology and ethology of rodents, mosquitos, termites, cockroaches, bedbug, flies and their management practices.





Treatments for safe trade- NIPHM organised a 14 day's training programme from 03.09.2025 to 16.09.2025, under the sponsorship of Indian Technical and Economic Cooperation (ITEC), Government of India. Total 28 participants representing 15 countries have attended the training. The main objective of the training program was to impart skills and creating awareness in the area of pest surveillance, detection and diagnosis of pests, different steps involved in PRA in order to prevent the spread and introduction of pests of plants and plant products across borders.



➤ ALP Fumigation Training for Karnataka State Seed Corporation Officers: A 15 days training programme was designed to train Karnataka state seed corporation officers to build a strong foundation of knowledge and practical skills for carrying out fumigation treatments safely, effectively, and in full compliance with national and international phytosanitary standards. The said programme was organised from 03.09.2025 to 17.09.2025 and attended by 04 participants on payment basis.



- **Rodent Pest Management**: One 05 day's training program on Rodent Pest Management was organised for the government and structural pest management professionals from 08.09.2025 to 12.09.2025. Total 17 participants attended the training. The participant's learned about major rodent species and their economic importance, ecology and ethology of rodents, breeding profile and their integrated pest management practices.
- Pone day workshop on "Upskilling in Urban Pest Management" was organised by NIPHM at Dil Sarie Restaurant, Surat, Gujarat on 19.09.2025 in association with Indian Pest Control Association Total 174 pest management professionals from Gujarat and Maharashtra states were attended the training. The workshop has familiarised the participants management practices of mosquito, termites, bed management and major rodent pest's in urban environment.







## PBD - FARMERS PROGRAMME

### **WDRA Sponsored Programmes:**

Farmers Awareness Programme on WDRA and eNWR (WDRA Sponsored): Warehousing Development Regulatory Authority (WDRA) has implemented e NWR system in the country and regulates through registration of warehouses intending to issue e NWRs against deposited commodities. By storing goods in WDRA registered warehouses food grains will be stored in good condition protecting the stock from infestation and farmers can be benefited by pledging loans from bank against the e-NWR issued. Thereafter, they can sell the produce when prices improve and adjust the pledge loan. This will help in improving farmers' income also. 07 one day training programs on Farmers Awareness Programme on WDRA and benefits of NWR were organized to educate the farmers on WDRA and benefits of Negotiable Warehouse Receipt on 18.06.2025, 18.07.2025, 05.08.2025, 22.08.2025, 16.09.2025, 19.09.2025 and 22.09.2025 at Gaddipally, Jammikunta, Siddipeta, Ramachandrapur, Chandupatla, Madanapur and Adilabad respectively. Total 352 farmers attended the programs (50, 52, 50, 50, 50, 50 and 50 each program).





# Forthcoming training programmes

Name of the programme	No. of Days	From	То
PBD	<u> </u>		
Seed Health Testing and Molecular Diagnostic Techniques for plant pathogens	05 Days	06.10.2025	10.10.2025
Plant Quarantine requirements for planting material including Tissue Culture plants	03 Days	13.10.2025	15.10.2025
Vertebrate Pest Management – Wild boar, Monkey and Birds	03 Days	15.10.2025	17.10.2025
Fruit fly Surveillance and Management	01 Days	30.10.2025	
Phytosanitary measures for export as Safe export	03 Days	10.11.2025	12.11.2025
Fumigation as a Phytosanitary Treatment (Methyl Bromide and Aluminium Phosphide)	15 Days	11.11.2025	25.11.2025
Pathological techniques for detection and diagnosis of plant diseases	05 Days	17.11.2025	21.11.2025
Import and Export Management: rules and regulations	03 Days	17.12.2025	19.12.2025
Pest Surveillance techniques for agricultural and horticultural crops (Kharif / Rabi)	03 Days	08.12.2025	10.12.2025
Non-Insect Pest Management – Mites, crabs, snails, slugs and avian	03 Days	12.11.2025	14.11.2025



# **Plant Health Management Division**

The Plant Health Management Division has organized following training programmes during the months of **July-September**, 2025.

# **Capacity Building Programmes:**

S No	Name of the programs	No. of Days	From	То
I.	Officers programme		<b>!</b>	1
1.	Field diagnosis of pests for Integrated Pest Management	05	14.07.2025	18.07.2025
2.	Integrated Pest Management (IPM) in Pulses	05	15.07.2025	17.07.2025
3.	Integrated Pest Management (IPM) in Mango	01	22.07.2025	22.07.2025
4.	Field diagnosis of pests for Integrated Pest Management	05	28.07.2025	01.08.2025
5.	Establishment of Bio-input Resource Centers	05	04.08.2025	08.08.2025
6.	Pest Diagnosis and Advisories using NPSS App	01	06.08.2025	06.08.2025
7.	Production protocol for biofertilizers	05	08.09.2025	12.09.2025
8.	Production Protocol for Biocontrol Agents and Microbial Biopesticides	10	10.09.2025	19.09.2025
II.	Farmers programme			
1.	Establishment of Bio-input Resource Centres for Natural Farming	03	09.07.2025	11.07.2025
2.	Establishment of Bio-input Resource Centres for Natural Farming	03	15.07.2025	17.07.2025
3.	Establishment of Bio-input Resource Centres for Natural Farming	03	28.07.2025	30.07.2025
4.	On farm production of Bio inputs and their application methods	03	05.08.2025	07.08.2025
5.	Bio-input Production and application in organic and natural farming systems	03	11.08.2025	13.08.2025
6.	Establishment of Bio-input Resource Centres for Natural Farming	03	18.08.2025	20.08.2025
7.	On farm production of Bioinputs	03	10.09.2025	12.09.2025
8.	Pest Management in Organic/Natural farming for FPO farmers (Online)	01	03.09.2025	03.09.2025
9.	Establishment of Bio-input Resource Centre (BRCs) for Natural Farming	03	17.092025	19.09.2025

10.	Establishment of Bioinput Resource Centre for Natural Farming	03	22.09.2025	24.09.2025
III.	Webinars/Workshop			
1.	National Workshop on "Evolving an Ecosystem for Supporting Establishment and Scaling Up of Bio-input Resource Centres (BRCs)	02	12.08.2025	13.08.2025
IV.	Student training programme			
1.	Sustainable Soil & Plant Health Management	02	30.07.2025	31.07.2025

# **Training programme report (officers)**

## > Field diagnosis of pests for Integrated Pest Management

An exclusive two training programs were conducted on 'Field diagnosis of pests for Integrated Pest Management for officials of crop pest surveillance program (CROPSAP) Maharashtra from 14.07.2025 to 18.07.2025 and 28.07.2025 to 01.08.2025 (5 days). In these programs a total of 49 field level officers from different districts of Maharashtra have participated. The participants underwent various aspects of pest monitoring practices like principles of IPM & insect pest management, field diagnosis of pests: AESA exercise, field visit and major diseases, integrated disease management in rice cotton and pulses, pest surveillance methodologies, pest diagnosis methods, recent pest incursions and use of NPSS app in decision making etc., were covered.











Pseudomonas and different bio-fertilizers for the biological control of nematodes, Plant parasitic nematodes in orchard crops and their management. Hands on practices were done on handling of Nematodes, entomopathogenic nematodes, diagnosis of Plant parasitic nematodes in Horticultural crops.





## > Orientation Training to Master Trainers for Safe and Judicious Use of Glyphosate by PCOs

A training programme on 'Orientation Training to Master Trainers for Safe and Judicious Use of Glyphosate by PCOs' Batch- XIII' was organized at NIPHM on 16.07.2024. Total of 71 Officers/ Scientists from KVKs, SAUs, SAMETIS, DPPQ&S and State Agriculture Dept. of different states have attended. In this training program, awareness about Glyphosate and its uses, properties of Glyphosate & its formulations, toxicity, environmental effects, doses, calculations and weed control efficiency of glyphosate, label and leaflet warnings, DOs and DON'Ts, safety precautions and application techniques of Glyphosate herbicide were covered. The programme was aimed to sensitise and create a pool of Master Trainers for training the rural youths to act as Pest Control Operators (PCOs) and implement restricted use of Glyphosate around the country. Dr Archana Sinha Joint Director (Chemistry) & Addl. PPA DA&FW also interacted with participants and clarified the queries as per CIBRC norms.











### > Integrated Pest Management (IPM) in Pulses

An online training programme on 'Integrated Pest Management (IPM) in Pulses' in collaboration with ICAR-Indian Institute Pulses Research (IIPR), Kanpur was conducted at NIPHM from 15.07.2025 to 16.07.2025 (02 days). In this program, a total of 31 participants from different states have participated. The training mainly focused on overview of pulse production and plant protection, diagnosis and management of major fungal and virus diseases in pulses, integrated major insect pests, weed, nematode management in pulses, development of bioformulations and their application to manage soil-borne diseases in pulses.





### Integrated Pest Management (IPM) in Mango

An exclusive one-day online training programme on 'Integrated Pest Management (IPM) in Mango' was conducted on 22.07.2025. During this program a total of 33 participants from different parts of the country have participated. The participants underwent sessions on major insect pest and diseases along with their management. Pruning and orchard sanitation in mango orchards, fruitfly management with NIPHM low cost trap was also covered.





#### **Establishment of Bio-input Resource Centers**

A five-day training programme on the Establishment of Bio-input Resource Centers (BRCs) was conducted at NIPHM, Hyderabad, from 04–08 August 2025. A total of 44 participants, including government officials, entrepreneurs, and members of Farmer Producer Organizations (FPOs) from various states attended the programme. The training covered key topics such as the concept and protocols of BRCs, natural farming (NF) preparations for soil health, pest, and disease management as well as on-farm production of soil amendments like biochar, biofertilizers, biopesticides (e.g., *Trichoderma, Pseudomonas fluorescens*), entomopathogenic nematodes (EPNs), and pheromone traps. Participants also visited NIPHM laboratories and a functional BRC unit for hands-

on exposure. The programme equipped participants with the essential knowledge and practical skills to adopt and promote BRCs in natural farming. It is expected that they will establish need-based local BRCs and actively promote NF preparations to support sustainable agriculture in their respective regions.









# > Production protocol for biofertilizers

A five-day training programme on "Production Protocol for Biofertilizers" was organized at NIPHM, Hyderabad, from 8<sup>th</sup> to12<sup>th</sup> September 2025(5 days). A total of 30 participants from various states, have participated in the programme. They underwent sessions on types and importance of biofertilizers, isolation and purification of beneficial bacteria, mass production of liquid and carrier-based biofertilizers, microbial inputs for abiotic stress tolerance, next-generation microbial formulations, application methods, fermenter operation, and upscaling processes.





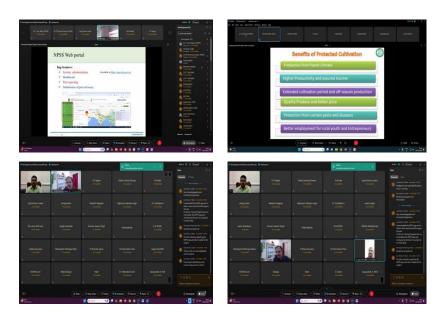






## Pest Diagnosis and Advisories using NPSS App

An exclusive online training program on 'Pest Diagnosis and Advisories using NPSS App' was conducted on 6th August 2025. A total of 64 participants attended the training through online mode. The programme aimed to build the capacities of agricultural officers, field-level facilitators, and other stakeholders in the efficient use of the NPSS (National Pest Surveillance System) mobile application for accurate pest identification and advisory dissemination.



# Production Protocol for Biocontrol Agents and Microbial Biopesticides

An Officers Training Programme on 'Production Protocol for Biocontrol Agents and Microbial Biopesticides' was organized at NIPHM from 10<sup>th</sup> to 19<sup>th</sup> September 2025. A total of 23 participants including 17 from Government departments representing SAUs, state agriculture departments and 6 officers from the private sector have participated. The programme comprised lectures, practical sessions, laboratory exercises, institutional and field visits, assignments, and participant-led discussions. Key topics included principles of biological control and the role of biopesticides, mass production techniques of parasitoids, predators, entomopathogenic fungi, entomopathogenic nematodes, biofertilizers and biopesticides as well as quality control standards of microbial biopesticides. The programme enhanced participants' knowledge and technical skills in sustainable pest management using biocontrol agents and microbial biopesticides.









### Farmers training programmes

### **Establishment of Bio-input Resource Centres for Natural Farming**

A three-day training programme on Establishment of Bio-input Resource Centres (BRCs) for Natural Farming was conducted in four batches at NIPHM, Hyderabad from 9<sup>th</sup> to 11 July;15th to 17<sup>th</sup> July, 2025; 18<sup>th</sup> to 20<sup>th</sup> August and 17<sup>th</sup> to 19<sup>th</sup> September,2025 for 165 FPO farmers from Nashik district, Maharashtra. The programmes covered key topics including the concept and protocols of BRCs, natural farming (NF) preparations for soil, pest, and disease management, integrated farming systems, and on-farm production of biofertilizers, biocontrol agents (*Trichoderma, Pseudomonas fluorescens*), EPNs, and pheromone traps. Participants also visited NIPHM laboratories, IFS models, and a functional BRC unit for hands-on exposure. The training equipped FPO farmers with the necessary knowledge and practical insights to adopt and promote the National Mission on Natural Farming (NMNF) scheme. The participants are expected to establish need-based local BRCs and actively promote NF preparations for sustainable agriculture in their respective regions.











### **Establishment of Bio-input Resource Centres for Natural Farming**

A training programme on 'Establishment of Bio-input Resource Centres for Natural Farming (A special program for FPO farmers, sponsored by Development Foundation) has been organized from 28.07.2025 to 30.07.2025 (3 days). A total of 30 participants from Washim Dist. Maharashtra have participated. They underwent sessions on Introduction to Bionput Resource Centres (BRCs) under natural farming, protocols and requirements for establishment of BRCs, agroecosystem analysis-field observations & NPSS app. for pest identification and management recommendations, use of pheromone traps for pest management and natural farming preparation and usage, scaling up of different bioinput production in BRCs etc. This program shall be helpful to the participants in getting the hands on experience and enhancing the knowledge on establishment of BRC protocols, production protocols of bio-inputs and their application methods, organic and natural farming practices.









## Bio-input Production and application in organic and natural farming systems

A three-day training programme on Bio-input Production and application in organic and natural farming systems was conducted at NIPHM, Hyderabad from 11–13 August 2025 for 24 FPO farmers from districts of Yavatmal & Amravati have participated. The programme covered key topics including the concept and protocols of BRCs, pesticide residue and challenges, natural farming (NF) preparations for soil, pest, and disease management, and onfarm production of biofertilizers, biocontrol agents (*Trichoderma, Pseudomonas fluorescens*), EPNs, and fruit fly lures, etc. Participants also visited NIPHM laboratories, and a functional BRC unit for hands-on exposure. The training equipped FPO farmers with the necessary knowledge and practical insights to adopt and promote organic and natural farming practices. The participants are expected to establish need based local BRCs and actively promote NF preparations for sustainable agriculture in their respective regions.













### > On farm production of Bio inputs and their application methods

A special training program sponsored by ATMA, Latur district, Maharashtra on 'On-farm production of bio-inputs and their application methods' has been organized by NIPHM from 05.08.2025 to 07.08.2025 (3 days). In this program 32 farmers/ FPO members have participated from Latur district of Maharashtra. This program shall be helpful to the participants in getting the hands-on experience and enhancing the knowledge on protocols for onfarm production of bio-inputs and their application methods, organic and natural farming preparations and use of NPSS app for decision making for pest management.

# ➤ Pest Management in Organic/Natural farming for FPO farmers

An online training programme on 'Pest Management in Organic/Natural farming for FPO farmers' was conducted on 3<sup>rd</sup> September, 2025. In this program, a total of 30 participants from different states and diverse farmer producing organizations and companies have participated.



### > On farm production of Bio inputs

A three days farmer training program on 'Onfarm production of Bioinputs' was conducted from 10<sup>th</sup> to12<sup>th</sup> September, 2025. During this program 10 farmers/ FPO members from AP and Telangana have participated. This program will be helpful to the participants in enhancing the knowledge on on-farm production of bio-inputs and their application methods, natural farming preparations &their use; Use of NPSS app. for decision making for pest management etc.





# **Establishment of Bioinput Resource Centre for Natural Farming**

An exclusive three-days training programme on Establishment of Bio-input Resource Centers (BRCs) for Natural Farming was conducted for FPO members at NIPHM, Hyderabad from 22<sup>nd</sup> to 24<sup>th</sup> September, 2025 (3 days). A total of 17 FPO farmers from AP, Telangana, Tamilnadu and Maharashtra have participated. The programme has covered key topics such as concepts and protocols of BRCs, natural farming (NF) preparations for soil, pest, and disease management, and on-farm production of bio inputs. Participants also visited NIPHM laboratories and a functional BRC unit for hands-on exposure.

### Webinars/Workshop/Conference:

# > National Workshop on "Evolving an Ecosystem for Supporting Establishment and Scaling Up of Bio-input Resource Centres (BRCs)

National Coalition for Natural Farming, WASSAN India, Centre for Sustainable Agriculture in collaboration with National Institute of Plant Health Management (NIPHM) hosted a National Workshop on "Evolving National Support Ecosystem for BRCs" at the NIPHM campus, Hyderabad, from 12<sup>th</sup> to13th August 2025. The workshop is intended as a platform for different stake holders to share their experiences and on the nature and form of blackened support required by BRCs. A total of 42 BRCs facilitators have participated in this program.





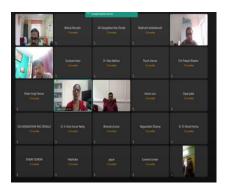


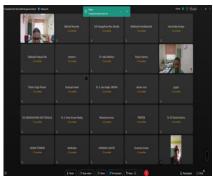


# **Student training programme:**

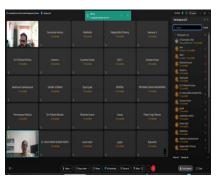
## > Sustainable Soil & Plant Health Management

As per the training calendar of NIPHM (2025–26), an online training programme on 'Sustainable Soil & Plant Health Management' has been organized by NIPHM from 30<sup>th</sup> to 31<sup>st</sup> July 2025. A total of 32 participants from various states attended the programme. They underwent sessions on soil test based integrated nutrient management, rhizosphere engineering for soil health improvement, agro-ecosystem analysis and ecological engineering for pest management, bio-control agents for sustainable insect pest management, bio pesticides for sustainable disease management, entomopathogenic nematodes for pest management, bio pesticides for sustainable insect pest management. The program is expected to enhance participants understanding and knowledge of diverse practices related to sustainable soil and plant health management.











# Forthcoming training programmes

S No	Name of the programme	No. of	From	То		
T	Days					
<u>I.</u>	Officers training programmes	0.2	00.10.2025	10.10.2025		
1.	Plant Health Management in Rabi Oilseed crops	03	08.10.2025	10.10.2025		
2.	Quality Control of Microbial Bio-pesticides	10	08.10.2025	17.10.2025		
3.	Climate-Smart Crop Protection Strategies	03	14.10.2025	16.10.2025		
4.	Biochar technology for Soil Health improvement	01	29.10.2025	29.10.2025		
5.	Integrated Pest Management (IPM) in Coconut and Oil Palm	02	06.11.2025	07.11.2025		
6.	Agroecological approaches for pest management in Rabi crops	05	10.11.2025	14.11.2025		
7.	Restricted use of Glyphosate by PCOs	01	12.11.2025	12.11.2025		
8.	Plant Health Management Approaches for sustainable Agriculture	21	20.11.2025	10.12.2025		
9.	Problematic and beneficial nematodes in agriculture	05	08.12.2025	12.12.2025		
10.	Pest Management in organic and natural farming	03	09.12.2025	11.12.2025		
11.	Protecting Orchards and clean planting with Biointensive approaches	15.12.2025	19.12.2025			
12.	Strategies for Insect Biodiversity 03 16.12.2025 18.12.20 Conservation					
II.	Farmers training programmes					
1.	Establishment of Bio-input Resource Centers (BRCs)	03	17.11.2025 to 19.11.2025			
2.	On farm production of Bioinputs	03	13.10.2025 to 15.10.2025			
			19.11.2025 to 21.11.2025			
			10.12.2025 to 12.12.2025			
III.	Certificate course- NIL					
IV	Webinars/Workshop-NIL					
V	Student training programme					
1.	Integrated Pest Management in agri./ horticultural crops	05	17.11.2025	21.11.2025		
2.	Diagnosis and management of pests in urban farming	09.12.2025	09.12.2025			



## **Pesticide Management Division**

The Pesticide Management Division has organized following training programmes during the months of **July-September**, 2025.

# **Capacity Building Programmes:**

Sl. No.	Name of the programme	No. of Days	From	То
1.	Inspection, Sampling and Prosecution procedure under Insecticide Act, 1968 (ISPP)	5	07.07.2025	11.07.2025
Laboratory Quality Management 2. System and Internal Audit as per ISO/IEC 17025:2017		5	14.07.2025	18.07.2025
3.	Pesticide Formulation Analysis	45	29.07.2025	11.09.2025
4.	Handling/Operation of LC-MS/MS for Chemical Analysis	5	18.08.2025	22.08.2025
5.	Inspection, Sampling and Prosecution procedure under Insecticide Act, 1968 (ISPP)	5	08.09.2025	12.09.2025
6.	Laboratory Quality Management System and Internal Audit as per ISO/IEC 17025:2017	5	15.09.2025	19.09.2025
7.	Analysis of Organochlorine and Organophosphate Pesticides in Vegetables by GC-MS/MS (UNSCHEDULE Paid Programme)	3	17.09.2025	19.09.2025

### ➤ Inspection, Sampling and Prosecution Procedures under Insecticide Act, 1968 (ISPP):

The division has conducted 5 days training programme on "Inspection and Sampling of pesticides under Insecticide Act, 1968 (ISPP)" from 07.07.2025 to 11.07.2025. A total of 37 officers have participated from the States Agriculture Department of Andhra Pradesh, Madhya Pradesh, Haryana, Rajasthan, Jammu and Kashmir, Punjab, Jarkhand, Uttarakhand, Uttar Pradesh and Maharashtra. The participants were trained on inspection, sampling of pesticides for quality control and various aspects of the Insecticide Act, 1968 & Insecticide Rules 1971.





**Inspection, Sampling and Prosecution Procedures under Insecticide Act, 1968 (ISPP)** 

## ➤ Laboratory Quality Management System and Internal Audit as per ISO/IEC 17025:2017

The division has conducted 5 days training programme on "Laboratory Quality Management System and Internal Audit as per ISO/IEC 17025:2017" from 14.07.2025 to 18.07.2025. A total of 38 officials/Analysts have participated from eight States viz. Andhra Pradesh, Bihar, Jammu & Kashmir, Karnataka, Maharashtra, Meghalaya, Tamil Nadu and Telangana. The participants were trained on general requirements of testing laboratory for competency as per ISO/IEC 17025 2017 and conduction of Internal Audit.





Laboratory Quality Management System and Internal Audit as per ISO/IEC 17025:2017

#### > Pesticide Formulation Analysis (45 days):

The division has conducted 45 days training programme on "Pesticide Formulation Analysis" from 29.07.2025 to 11.09.2025 for the officials working in Pesticide Testing Laboratory to impart hands on training on various techniques involved in quality control of pesticide such as volumetric, spectroscopic and chromatrography etc. A total of 27 officials/Analysts from the State Agriculture Department of Andhra Pradesh, Chattisgarh, Karnataka, Kerala, Maharashtra, Punjab, Tamil Nadu, Telangana and Uttarakhand were participated.









**Pesticide Formulation Analysis** 

# ➤ Handling/Operation of LC-MS/MS for Chemical Analysis (Paid programme)

The division has conducted 5 days training programme on "Handling/Operation of LC-MS/MS for Chemical Analysis" from 18.08.2025 to 22.08.2025. A total of 4 trainees have participated. Two student and two officials from Vasantrao Naik Marathwada Krishi Vidyapeeth, Parbhani Maharashtra Agriculture University were trained on handling of LC-MS/MS for analysis of chemical pesticide.





Handling/Operation of LC-MS/MS for Chemical Analysis



## > Inspection, Sampling and Prosecution Procedures under Insecticide Act, 1968

The division has conducted 5 days training programme on "Inspection, Sampling and Prosecution procedure under Insecticide Act, 1968 (ISPP)" from 08.09.2025 to 12.09.2025. A total of 24 officials have participated from State Agricultute Dept. of Madhya Pradesh, Jammu & Kashmir, Punjab, Chhattisgarh, Uttar Pradesh, Karnataka and Maharashtra. The participants were trained on inspection, sampling of pesticides for quality control, Prosecution Procedures under the Act and various aspects of the Insecticide Act, 1968 & Insecticide Rules 1971.

### Laboratory Quality management System & Internal Audit as per ISO/IEC 17025:2017

The division has conducted 5 days training programme on "Laboratory Quality Management System and Internal Audit as per ISO/IEC 17025:2017" from 15.09.2025 to 19.09.2025. A total of 33 officials/Analysts have participated from States Agriculture Dept. of Andhra Pradesh, Maharashtra, Tamil Nadu, Uttar Pradesh, Rajasthan and Telangana. The participants were trained on general requirements of testing laboratory for competency as per ISO/IEC 17025 2017 and conduction of Internal Audit.





Laboratory Quality management system & Internal Audit as per ISO/IEC 17025:2017

# > Analysis of Organochlorine and Organophosphate Pesticides in Vegetables by GC-MS/MS (Paid Programme)

The division has conducted a training programme on "Analysis of Organochlorine and Organophosphate Pesticides in Vegetables by GC-MS/MS" from 17.09.2025 to 19.09.2025 (3 days) in collaboration with NABL (QCI). A total of 13 officials/Analyst have participated from Govt. & Pvt. Laboratories including officials from NABL. The participants were trained on analysis of Organochlorine and Organophosphate residues in vegetables and operation/handling of GC-MS/MS.





Analysis of Organochlorine & Organophosphate Pesticides in Vegetables by GC-MS/MS

# **Forthcoming training programmes**

Sl.	Title of the Programme	Duration	From	To	Eligibility Criteria
No.		(days)			
1.	Method validation and Measurement of Uncertainty in Pesticide Formulation Analysis	5	06.10.2024	10.10.2025	Analysts / Scientists working in Govt. laboratories/Universities
2.	Impact of Pesticide Residues on Agri. Exports and basics of Pesticide Residue Analysis	4	13.10.2025	16.10.2025	Officers/Scientists working in Govt. Deptt./Universities.
3.	Method validation and Measurement of Uncertainty in Pesticide Residue Analysis	5	27.10.2025	31.10.2025	Analysts / Scientists working in Govt. laboratories/Universities
4.	Refresher program on Pesticide Formulation Analysis	10	03.11.2025	12.11.2025	Officers/analysts with minimum 1 year experiences of Pesticide Analysis
5.	Pesticide Residue Analysis (PRA)	21	12.11.2025	02.12.2025	Analysts / Scientists working in Govt. laboratories/Universities
6.	Calibration of laboratory glassware and equipment	5	24.11.2025	28.11.2025	Science Graduate
7.	Inspection, Sampling and Prosecution Procedures under Insecticide Act, 1968 (ISPP)	5	01.12.2025	05.12.2025	Agricultural / Horticultural Officers of State Deptt./ designated Insecticide Inspectors



## **Educational Programme:**

Agri. Input Management for Input Dealers (Online Diploma Course): It is an one year online course and a total of 38 candidates have enrolled during the month of April. The course material and videos of the course in different languages were uploaded as per the schedule.

# **Plant Health Engineering Division**

The Plant Health Engineering Division has organized following training programmes during the months of **July-September**, 2025.

# **Capacity Building Programmes:**

S No	Category	Name of the programme	No. of Days	From	То
1.	Officers	Pesticide Application Techniques and Safety Measures – Physical Mode	03	22.07.2025	24.07.2025
2.	Officers	Pesticide Application Techniques and Safety Measures (Coillabrative) - Vitual Mode	03	20.08.2025	22.08.2025
3.	Officers	Digital Agriculture -Vitual Mode	03	11.08.2025	13.08.2025
4.	Officers	Post Harvest Management and Storage Techniques – Physical Mode	03	04.08.2025	06.08.2025
5.	Officers	Pesticide application Techniques & Safety Measures – Physical Mode	05	22.09.2025	26.09.2025
6.	Farmers	Pesticide application Techniques & Safety Measures for Farmers – Physical mode	01	01.08.2025	01.08.2025

# **Drone Remote Pilot Certification**

S No.	Name of Training Program/ Webinar	Duration (in days)	On/Off Campus
1.	Basic Remote Pilot Certification	08.09.2025 to 12.09.2025	On campus



## **▶** Pesticide Applications Techniques and Safety Measures(Hindi)

An exclusive three day training program in **Hindi** on "Pesticide Applications Techniques and Safety Measures" was organized from 22<sup>nd</sup> to 24<sup>th</sup> July 2025 for 30 officials (Male - 16, Female -14) from M/s Ambuja Foundation, Maharashtra on payment basis. This training emphasized participants in selecting the appropriate application technique, nozzle selection and maintenance of plant protection equipment for guiding farmers in proper selection of PP equipment, sprayers calibration and application of pesticides to achieve optimum pest management along with operator's safety.

Apart from this, topics on soil health management, pesticide toxicity and their effects, Integrated pest and disease management in cotton crop, Drones in agriculture were also covered. A visit was arranged to Soil health management laboratory, Rajendranagar where the importance of soil and how to main black cotton soil in an effective manner to increase the yield were explained.









#### **Pesticide application Techniques & Safety Measures:**

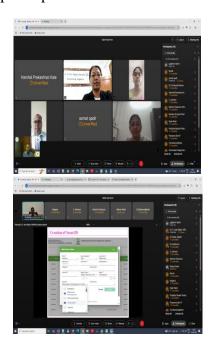
An online collaborative training program with EEI Neilokheri was organized on "Pesticide Application Techniques & Safety Measures" for extension functionaries and state Agriculture Scientists from Dept. of Agriculture and Horticulture and State SAUs from August, 20<sup>th</sup> to 22<sup>nd</sup> 2025. Total 69 participants (Male – 59, Female –10) participated from 9 states across the country. During the training Adverse impacts of Pesticides, principles of pesticide application techniques, efficient spraying techniques for plant protection, nozzles and its classification and calibration of sprayers were delivered from NIPHM experts. Other topics Problem of pesticide resistance and resurgence and their management, pesticide poisoning and safety measures during application of pesticides, insect pests of field crops and their management strategies, pesticide formulation methods and techniques, plant health diagnostic and management were covered with the help of resource persons.





## Digital Agriculture :

Online Digital Agriculture program was conducted from 11-08-2025 to 13-08-2025 which was attended by a total of 20 officers (male: 15 and female: 5) from various organizations across the country. The program comprised of various lectures covering, major topics related to the interventions of ICT in agriculture viz. Overview of Digital Agriculture, Smart Precision Models for Agriculture, NPSS, Plantix, Sensor based Agriculture, Online Tools for Detection and Identification of Pests, RS and GIS applications in agriculture, CABI Digital Tools AI enabled agroadvisories to farmers and FPOs, RootsTalk on The SaaS Platform for Crop Advisories and Agro-Inputs with covering a few case studies relating to implementation of AI/ML in agriculture. The program was well received and appreciated by all participants.







## **▶** Post Harvest Management and Storage Techniques:

PHE conducted on campus officers training programme from  $04^{th}$  -  $06^{th}$  August 2025 on "Post Harvest Management and Storage Techniques" for 13 officers (Male – 07, Female – 06). Participants attended the training program from 07 states. The participants were trained on post-harvest losses in cereals and fruits and vegetables Crop modelling to improve post-harvest supply chain, Insect and pest Management in Storage, Special crops for value addition, Harvesting Techniques, Handling and transportation, Storage methods and structures, Import and export procedures, Alternative processing methods , Packaging and Packaging materials. Visit was arranged to Sam Agri. Pvt Ltd.









## > Pesticide Applications Techniques and Safety Measures.

PHE conducted five days on campus training programme from 22<sup>nd</sup> - 26<sup>th</sup> September 2025 on "Pesticide Application Techniques and Safety Measures" for 07 officers (Male – 05 Female – 02) from 4 states namely (Telanagana-03, Tamil Nadu-02, Haryana-01 and J&K-01). The participants were trained on different aspects such as principles of pesticide application techniques, efficient spraying techniques, nozzle selection and calibration, safety measures while handling pesticides, Pesticide Formulation and Compatibility with practical sessions











## **▶** Pesticide Applications Techniques and Safety Measures

PHE division conducted an off-campus training programme on "Pesticide Application Techniques and Safety Measures" at Thimmareddyguda village, Shabad mandal, Chevella, Telangana on 1<sup>st</sup> August 2025. Er. M Udaya Bhanu (Scientific Officer) and Er. Govind Kumar Maurya (Assistant Scientific Officer) has organized this training program for 57 farmers (Male – 43, Female – 14) through Welspun Foundation. The training programme was moduled to cover the aspects of adverse impacts of spraying, basic spraying principles, selection of a sprayer, selection of nozzle, calibration of nozzles and sprayers, safety measures while handling pesticides and importance of Drone technology in Agriculture spraying.











02/08/2025 | Rangareddy | Page : 2 Source : https://epaper.ntnews.com/



#### పురుగు మందు పిచికాలీలో జాగ్రత్త

పురుగు మందు పచుకాలలు జాగ్రెత్త స్థాబాడ్ పథ్తి పంటసాగులో పురుగ మందు పిదికారీలో రైతులు తగు జాగ్ర క్రలు తీసుకోవాలని షాబాడ్ ఏఓ కృష్ణమాహన్ అన్నారు. శుక్రవారం మండల పరిధిలోగి తిమ్మారెడ్డిగూడలో వెల్స్పేషన్ ఫౌందేషన్ ఆధ్వర్యంలో జాతీయ మొక్కల ఆరోగ్య యాజమాన్య సంస్థ ప్రతినిధులు ఉదయఖాను, గోచింద్ కుమార్ మౌర్య హాజబై పత్తి పంటలో పుడుగు మందు పిదికాలీ విధానం, తీసు కోవలసిన జాగ్రశ్రలు, డ్రోస్ పిచికారీ డ్రోన్ దీదీ స్పేమిసై అవగాహన కల్పిం రారు. ఈ కార్యక్రమంలో ఏతడి గీత, వెల్స్పేషన్ ఫౌందేషన్ సీనిపెత్ సువేషం, పందాయతీ కార్యకథిప్లి రాందండ్రారెడ్డి, మాజ్ సర్బంచ్ పొండు, వెల్సేషన్ ఫౌం దేషన్ ప్రతినిదులు, రైతులు తదితరులున్నారు.

02/08/2025 | Chevella | Page : : Source: https://epaper.sakshi.com/

## **Drone trainings**

#### **Basic Remote Pilot Certification:**

This training is part of the Drone Academy who trains and certifies the Drone Pilots for use of drones in various applications. The academy has been certified as RPTO (Remote Pilot Training Organization) in association with an Industry partner (M/s Marut Drones). One training program on Basic Remote Pilot Certification conducted, one programme from 8.09.2025 to 12.09.2025 total 03 participants (03 male) attended. Lectures were arranged on topic viz., Introduction on international civil aviation organization, RPAS with in ICAO frame work, formation of RPAS, Classification of drones, Drone operation zones, ATC procedure, radio telephony and flight radio telephony, Basic principles of flight, Types of wind designs, Battery maintenance, Rotorcraft operations and aerodynamics, Application of drones in each sector, Hybrid operations and aerodynamics, Weather and meteorology, Risk assessment and analysis safety management system, drone maintenance etc. The lab assembly and maintenance of drones and simulation experiments for drone flying also was included in the curriculum. Exclusive 3 days of on-field flying classes also were conducted in dual as well as solo mode.





### **Educational Programs:**

#### PGDPHM/DPHM:

- i. PGDPHM regular classes were organized.
- ii. Examnation were counducted.



# **Forthcoming training programmes**

S.No	Title of the Programme	Division	From	То	Eligibility criteria	Course Coordinator & e-mail
1.		РНЕ	17.11.2025	21.11.2025	Extension officers from State Agriculture and Horticulture departments, Scientists of ICAR, SAUs and officials from KVKs, DPPQs	Dr. Vidhu Kampurath jdenggniphm-ap@nic.in
2.	RS & GIS applications in Plant Health Management	РНЕ	03.12.2025	13.11.2025	State Agriculture and Horticulture departments, Scientists of ICAR, SAUs and officials from KVKs, DPPQs50	Er. M. Udaya Bhanu sopheniphm2-ap@nic.in
3.	Enhancing efficiency through optimum spraying techniques for effective pest and disease control techniques	PHE	03.12.2025	23.12.2025	Extension officers from State Agriculture and Horticulture departments, Scientists of ICAR, SAUs and officials from KVKs, DPPQs, NGOs	Dr. Vidhu Kampurath jdenggniphm-ap@nic.in Er. Haneefa Begum asopheniphm2-ap@nic.in
4.	Professional Agri spraying through drones (Only on payment basis)	РНЕ	September- 2025	September - 2025	RPC (Drone pilot) holders	Er. Haneefa Begum asopheniphm2-ap@nic.in
5.		РНЕ	November- 2025	November - 2025	RPC (Drone pilot) holders	Er. M. Udaya Bhanu sopheniphm2-ap@nic.in
6.	* *	РНЕ	15.12.2025	19.12.2025	Extension officers from State Agriculture and Horticulture departments, Scientists of ICAR, SAUs and officials from KVKs, DPPQs, NGOs	Dr. Vidhu Kampurath jdenggniphm-ap@nic.in Er. Haneefa Begum asopheniphm2-ap@nic.in
7.	Pesticide application techniques	PHE	Nov-2025	Nov-2025	Farmers / FPO	Er. Haneefa Begum asopheniphm2-ap@nic.in
8.	•	РНЕ	Dec-2025	Dec-2025	Farmers / FPO	Er. Haneefa Begum asopheniphm2-ap@nic.in



# **Special Events**

• Parthenium awareness week: An awareness week of Parthenium was observed at NIPHM from 16-22 August 2025. All the staff and trainees of NIPHM have participated in this event In addition, an awareness week was observed at a residential quarter of NIPHM. All the residents and families joined and participated in the mass removal of *Parthenium* weed on quarters premises. All the divisional heads, respective laboratory in-charges, outsource labour, housekeeping team are involved in mass removal activity in NIPHM campus, farm and hostel premises. Further, a team of NIPHM staff have visited GHMC office, Rajendranagar, Hyderabad and created awareness about Parthenium and its health hazards among sanitary workers of GHMC.









As part of *Swachhta Hi Seva – 2025* and *Special Campaign 5.0* for institutionalizing cleanliness, the PHE Division identified model cleanliness sites within the campus and also organized a Swachhta camp at Fresh Farm Pick, Shamshabad village. The program, attended by about 25 participants, focused on creating awareness and promoting behavioural changes for maintaining clean surroundings. The camp aimed to encourage behavioural changes for maintaining hygiene and clean surroundings. Participants were sensitized about proper waste segregation, reduction of plastic usage, and safe disposal of household waste. The program highlighted the importance of collective responsibility in keeping the environment clean and promoted sustainable practices that benefit both health and the community.









In Campus Swachhata Drive





On Campus Swachhata awareness drive



### **Visitors:**

- Officials: Mr. Kondanda Reddy, Chairman & members of Telangana Agriculture and Farmers Welfare Commission visited NIPHM and its laboratories on 23.09.2025. They also interacted with officers of NIPHM and trainees
- Students Visit: 105 students from Maharasthra, 55 students from Hyderabad Dist, Telangana visited NIPHM.
- Farmers Visit: During this quarter, 27 farmers from Odisha, 105 farmers from Telangana and 40 farmers from Tamil Nadu visited NIPHM biocontrol lab, insect museum, demonstration farm etc

## **Research & Development**

AICRP- BC is continued during the quarter. As per the technical program 2025-26 the spraying of different treatments of biopesticides in the maize, chilli and tomato fields were done and recorded data of different parameters at regular intervals.

### **▶** Pesticide Formulation and Residue Analytical Centre (PFRAC):

Pesticide Formulation and Residue Analytical Centre (PFRAC), Pesticide Management Division, is an accreditated laboratory in accordance to ISO/IEC 17025:2017.

During the period the laboratory has collected 292 samples (Fruits, vegetables, cereals, pulses, milk and water) from Medchal-Malkajigiri Farm gate, Saidabad and Alwal market Hyderabad and Organic Outlets of Hyderabad under Central Sector Scheme "Monitoring of Pesticide Residues at National Level (MPRNL). The samples were analyzed for pesticide residues by LC-MS/MS and GC-MS/MS. A total of 184 samples (fruit and vegetables) were received from ANGRAU and 105 water samples (extract) from CSIR-NEERI. The samples were analyzed under MPRNL scheme.

The division has also received 102 tobacco samples from Tobacco Board, Guntur and the samples were analyzed. A total of 08 botanical/bio-pesticides samples were received from various state of India. The samples were analyzed by GC-MS/MS and LC-MS/MS.

Another 10 pesticides formulation samples were also received from National Seed Corporation, Pvt. for quality test of pesticide product and other customer samples. All the samples were analyzed for the required parameters. The samples received under Interlaboratory Comparison programme were also analyzed.













Pesticide Formulation and Residue Analytical Centre laboratory (PFRAC)

## > Proficiency testing (PT) programme on Pesticide Residues Analysis (PT-PRA):

Proficiency Testing Centre has organized PT PRA programme on Mango (PTC/PR/01/25-26) and Wheat (PTC/PR/02/25-26) in the month of July 2025. Samples were prepared and trail studies were carried out for Mango and Wheat samples. After homogeneity study, PT samples (Mango and Wheat) were sent to 35 participants laboratories. The laboratories/participants results of Mango sample (pesticide: Chlorantraniliprole, Cyhalothrin, Deltamethrin, Fenvalerate, Hexaconazole, Imidacloprid, Monocrotophos and Profenofos) and Wheat sample (Pesticide: Bifenthrin, Chlorpyrifos, Deltamethrin, Dimethoate, Emamectin Benzoate, Fenitrothion, Malathion, Pretilachlor and Quinalphos) were evaluated.













Preparation of Mango & Wheat samples (PTC/PR/01/25-26 & PTC/PR/02/25-26)



Another PT- program on Water (PTC/PR/03/25-26) was organised in the month of September 2025 and the samples were dispatched on 08<sup>th</sup> September 2025.







Preparation of Water sample (PTC/PR/03/25-26)

## ➤ Proficiency testing programme on Pesticide Formulation Analysis (PT-PFA):

Laboratory has organized PT PFA in the month of May 2025 for the pesticides viz. Cypermethrin Technical, Pretilachlor EC and Chlorpyrifos EC (PTC/PF/01, 02 & 03/24-25). Thirty three laboratories (Govt. and Private Laboratories) were participated in this programme. The laboratories/participants results were evaluated and interim reports have sent to 33 participants.





Preparation of sample (PTC/PF/01/24-25, PTC/PF/02/24-25, PTC/PF/03/24-25)

- ➤ Meeting/conferences attended: Members of BIS-FAD 1 and FAD 27 were attended meeting conducted by BIS for finalization of analysis methods/specification.
- ➤ Gazette Notification: The central government (Ministry of Agriculture and Farmers Welfare, (Department of Agriculture and Farmers Welfare), notified the officers of Pesticide Management Division, NIPHM as insecticide analysts for chemical pesticides for whole of India under section 19 of the Insecticides Act, 1968 (46 of 1968) read with rule 21 of the Insecticides Rule 1971 (Gazette Notification G.S.R. 567(E), 18<sup>th</sup> July)



#### **Lab Activities**

- ➤ Maintaining/Rearing of stored grain insect cultures viz. *Tribolium*, Rice weevil, Khapra, Pulse beetle, Cigarette beetle, saw toothed grain beetle and rice moth.
- > Fruit fly lure preparation (ME & CUE) and sale
- ➤ Urban pest insect box preparation
- ➤ Maintenance of vermicompost unit and sale
- ➤ Disease specimen- Herbarium collection
- ➤ Maintenance of vermicompost unit at NIPHM and Staff Quarters
- > QC lab for bio-pesticides: During the quarter, 14 biopesticide samples other states and 25 from NIPHM were received and tested for various quality parameters.
- ➤ **Biofertilizer Laboratory:** As a licensed Biofertilizer production unit, biofertilizers like Rhizobium, Azotobacter, Azospirillum, Phosphate Solubilizing Bacteria (PSB), Potassium Releasing Bacteria (KRB), Zinc Solubilizing Bacteria (ZnSB) and Mycorrhiza (VAM) were produced at NIPHM and provided to beneficiaries like farmers and other stakeholders such as tobacco board.
- ➤ **Bio-pesticide laboratory:** Activities like demonstration of on-farm production of *Trichoderma* and *Pseudomonas* to trainees, maintenance of mother culture of Trichoderma and Pseudomonas are performed in the lab. Bio-inoculum startup kits were provided to 93 trained officers / FPO farmers from different states for demonstration.
- ➤ Host, predators and parasitoids lab: NIPHM is maintaining and producing various parasitoids and predators for insect pest control. These beneficial insects, biocontrol agents were supplied to trainees and farmers for use in their fields. In this quarter, twelve farmers/ Scientists have taken different predators and parasitoids from NIPHM.



#### **Other Activities**

## > Farmer Advisory Cell Activities:

Farmer Advisory Cell is maintained by PHM division and faculty are interacting with farmers about their queries related to plant protection; bioinputs usage etc. 56 farmers approached NIPHM through telephonic communication during the quarter.

# > NIPHM Instructional farm

PHM division is maintaining IPM demonstration farm and polyhouse with diversified crops. The farmers and trainees visit the farm for observation and practical sessions on AESA, ecological engineering, collection of insect pests and beneficial insects.

### **➤** Polyhouse (Protected cultivation)

During this quarter, crops viz., tomato and cucumber were raised and monitored with necessary IPM practices for the pests control.



A view of Paddy crop in NIPHM farm



Broccoli and tomato cultivation in polyhouse



Tomato crop in NIPHM



Cucurbits cultivation on pandals

➤ PHE division engaged in the workshop on "Next Generation Drone Technology in Urban Pest Management" workshop and taken classes on Anti-Larval mosquito control in water bodies, pools and lakes, Cold Fogging in gated communities, Bee-hive removal at unapproachable heights, Large landscape areas & golf areas and demonstration of Manual drone flying and Auto mission was also shown for participants along with Different spraying techniques and equipment's were demonstrated. Total around 250 members were participated in workshop.









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