

EXPENDITURE FINANCE COMMITTEE (EFC)

FOR

SUB-MISSION ON PLANT PROTECTION AND PLANT QUARANTINE (SMPPQ)

1. Scheme Outline

1.1 Title of the Scheme

Sub Mission on Plant Protection and Plant Quarantine (SMPPQ)

1.2 Sponsoring Agency (Ministry / Department / Autonomous Body / Undertaking):

Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, Govt. of India

1.3 Total Cost of the proposed Scheme

Rs. **1315.02** crores for three years i.e. 2017-18 to 2019-20, which is coterminous with Fourteenth Finance Commission (FFC) period ending March, 2020

1.4 Proposed duration of the Scheme

The proposed duration is from April, 2017 till March 2020.

1.5 Nature of the Scheme: Central Sector Scheme/Centrally Sponsored Scheme

Sub Mission on Plant Protection and Plant Quarantine is a Central Sector Scheme

1.6 For Central Sector Schemes, sub-schemes/components, if any, may be mentioned. For Centrally Sponsored Schemes, central and state components, if any, may be mentioned.

Sub Mission on Plant Protection and Plant Quarantine (SMPPQ) is one of the Scheme under Green Revolution (Krishonnati Yojana). Earlier, it used to be a sub-mission under National Mission on Agriculture Extension & Technology (NMAET). The SMPPQ has the following components:

- i. Strengthening and Modernization of Pest Management Approach in India (SMPMA) which includes the following sub components:
 - a. Integrated Pest Management (IPM)
 - b. Locust Control and Research
 - c. Implementation of Insecticide Act, 1968
- ii. Strengthening and Modernization of Plant Quarantine Facilities in India (SMPQF)

- iii. Monitoring of Pesticide Residue at the National Level (MPRNL)
- iv. National Institute of Plant Health Management (NIPHM)

The details of the above mentioned components are at **Annexure I**.

1.7 Whether a New or a continuing Scheme? In case of a continuing Scheme, whether the old scheme was evaluated and what were the main findings?

Sub Mission on Plant Protection and Plant Quarantine (SMPPQ) is a continuing scheme. During the 12th Five Year Plan, various components of the SMPPQ were evaluated by Independent agencies. The main findings are at **Annexure II**. After the end of the 12th FYP, process for the evaluation studies has been initiated.

1.8 Whether in-principle approval is required? If yes, has it been obtained?

The approval is being sought.

1.9 Whether a Concept Paper or a Detailed Paper has been prepared and stakeholders consulted? In case of new centrally Sponsored Schemes, whether the State Governments have been consulted?

SMPPQ is an old continuing scheme with certain minor modifications proposed based on the experiences gained while implementing the scheme in the 12th Five Year Plan

1.10 Which existing schemes/sub-schemes are being dropped, merged or rationalized?

The mandate of the various above mentioned components of SMPPQ are different. Therefore, there is no proposal of dropping, merging or rationalizing.

1.11 Is there an overlap with an existing scheme/sub-scheme? If so, how duplication of efforts and wastage of resources are being avoided.

At present, financial assistance is provided under SMPPQ to the States for establishing/strengthening of Pesticide testing, bio-pesticides testing and Bio-control laboratory. The States also submits proposal under RKVY for establishing/strengthening of Pesticide testing, bio-pesticides testing and Bio-control laboratory. However, while sanctioning financial assistance, it is ensured that no duplication is being done.

1.12 In case of an umbrella scheme (program) give the details of schemes and sub-schemes under it along with the proposed outlay component-wise

NOT APPLICABLE

2. Outcomes and Deliverables

2.1 Stated aims and objectives of the Scheme

The primary aim of this Sub Mission is to minimize loss to quality and yield of agricultural crops from the ravages of insect pests, diseases, weeds, nematodes, rodents, etc. and to shield our agricultural bio-security from the incursions and spread of alien species. The Sub Mission also seeks to facilitate exports of Indian agricultural commodities to global markets and to promote good agricultural practices, particularly with respect to plant protection strategies and techniques. The objectives of various components under SMPPQ are as follows:

(i) Strengthening and Modernization of Pest Management Approach in India (SMPMA)

a. Integrated Pest Management (IPM)

The objectives of Strengthening and Modernization of Pest Management Approach in India (SMPMA) are as follows:

- Maximize crop production with minimum input costs;
- Minimize environmental pollution in soil, water and air due to pesticides;
- Minimize occupational health hazards due to chemical pesticides;
- Conserve ecosystem and maintain ecological equilibrium;
- Judicious use of chemical pesticides for reducing pesticide residues
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b. Locust Control and Research

The objectives of Locust Control and Research are as follows:

- To protect standing crops and other green vegetation from the ravages of Desert locust
- To monitor, forewarn and control the desert locust in the Scheduled Desert Area (SDA) in the States of Rajasthan & Gujarat being International obligation and commitment
- To conduct research on in respect of bio efficacy trials with new generation pesticides / bio pesticides against locusts and grasshoppers in the Laboratory at Field Station for Investigation on Locusts, Bikaner (Rajasthan).
- To maintain liaison and coordination with National and International Organizations. Human Resource development through training and demonstration for staff of Locust Warning Organization (LWO), State officials, BSF personnel, Farmers and other Stake holders.
- Maintain control potential to combat locust emergency by organizing locust control campaign

c. Implementation of Insecticides Act

A. Central Insecticides Board & Registration committee (CIB&RC)

The main objectives of the CIB&RC include:

- i. Processing of applications for grant of registration of Insecticides, including scrutiny of
 - a) legal requirements;
 - b) scientific data on Chemistry of the molecule/formulation;
 - c) scientific data on the efficacy, including metabolism and persistence, and working out approved usage of the insecticide and its formulation(s);
 - d) scientific data on safety of the insecticide;
 - e) information/data on packaging of the insecticide; and
 - f) Verification of shelf-life claims of insecticides.
- ii. Issuing of certificates of registration after approval by the RC;
- iii. Dealing with the cases for inclusion of new insecticides in Schedule to the Act;
- iv. Processing of post registration matters of insecticides;
- v. Issuing import permits for import of sample quantities of insecticides for research, test and trial purposes;
- vi. Issuing import permits for import of import insecticides for non-insecticidal uses;
- vii. Dealing of matters related to appeals, RTIs, court cases, etc pertaining to the Sectt;
- viii. Formulating draft guidelines for technical data generation and prescribing data requirement for registration of insecticides;
- ix. Rendering advice on technical matters to Central and State Governments as well as pesticide Industry;
- x. Amendments to the Act as well as the Rules;
- xi. Review of insecticides for restricting, banning or continued use; and
- xii. Organizing CIB Meetings for deciding policy issues and RC meetings for grant of registrations, endorsements and import permits.

B. Techno-Legal Cell

The objectives of Techno-legal Cell are:

- i. Making concerted efforts to ensure timely availability of quality pesticides to the farming community by ensuring effective implementation of the provisions of The Insecticide Act, 1968.
- ii. Co-ordination between SPTLs and DAC for various purposes like NABL accreditation of the laboratories, grant-in-aid to the states and UTs for setting up of new State Pesticides Testing laboratories (SPTLs) and strengthening of existing SPTLs and Bio-pesticides Testing Laboratories in the states.
- iii. TLC also co-ordinates between RPTLs and Directorate, Directorate and DAC and extends technical and legal expertise to SPTLs, RPTLs and Central Insecticide Inspectors starting from drawl of samples up to launching of prosecution in case of misbranded samples.

C. Central Insecticides Laboratory (CIL)

The objectives of CIL are:

- i. To analyze such samples of insecticides sent to it under the Act by any officer or authority and submission of certificates of analysis to the concerned authority;
- ii. To analyze samples of materials for insecticide residues under the provisions of the Act.
- iii. To carry out such investigations as may be necessary for the purpose of ensuring the
- iv. Conditions of Registration of Insecticides;
- v. To determine the efficacy and toxicity of insecticides;
- vi. To carry out such other functions as may be entrusted to it by the Central Government or by a State Government with the permission of the Central Government & after consultation with the Central Insecticides Board.

(ii) Strengthening and Modernization of Plant Quarantine Facilities in India (SMPQF)

The objectives of Strengthening and Modernization of Plant Quarantine Facilities in India (SMPQF) are as follows:

- Prevent the introduction and spread of exotic pests that are destructive to crops by regulating/restricting the import of plants/plant products.
- support market access for India's Agriculture products
- Facilitate safe global trade in agriculture by assisting the producers and exporters by providing a technically competent and reliable phytosanitary certificate system to meet the requirements of trading partners.

(iii) Monitoring of Pesticide Residue at the National Level (MPRNL)

The objectives of Monitoring of Pesticide Residue at the National Level (MPRNL) are as follows:

- To monitor pesticide residues in market and farm gate samples of food commodities
- To monitor pesticide residues in irrigated ground and surface water
- To identify crops and regions having preponderance of pesticide residues in order to focus extension efforts for Integrated Pest Management (IPM) and Good Agriculture Practices (GAP).
- To strengthen the infrastructure at Quarantine stations for testing/ certification of pesticide residues in export and import consignments.

(iv) National Institute of Plant Health Management (NIPHM)

The objectives of National Institute of Plant Health Management (NIPHM) are as follows:

- Human Resource Development in Plant Health Management, Plant Bio-security and Pesticide Management with special emphasis on crop-oriented Integrated Pest Management approaches and protecting the plant bio-security borders for all stake holders including public and private sectors.
- Human Resource development in analysis of Pesticide Formulations for monitoring the quality status of pesticides in States/U.Ts.,
- Pesticide residue analysis in various food commodities and environmental samples for food & environmental safety and quality management system for competence of testing system
- Develop systematic linkages between State, Regional, National and International Institutions of outstanding accomplishments in the field of Plant Biosecurity and Plant Health Management, Plant Biosecurity and Pesticide management.
- Function as a Nodal agency / forum for exchange of latest information on Plant Health Management.
- Collect and collate information on Plant Protection Technology for dissemination among the State Extension functionaries and farmers.

- Identify and develop modern management tools, techniques in pest management approaches with proper resource management/input management for providing needful policy support and for application at national and international level.
- Develop need-based field programmes for training and retraining of senior and middle level functionaries for executing plant health management programmes and using training of trainer approaches to ensure maximum reach of programmes.
- Conduct adoptive research in the area of Plant Health Management, Integrated Pest Management, Pesticide Management, Plant Quarantine, Bio-security and Pesticide delivery systems for effective management of crop pests.
- Serve as repository of ideas and develop communication and documentation services at national, regional and international level with regard to the subject of plant protection management.
- Forge linkages with national and international institutions, and create networks of knowledge sharing, through a programme of institutional collaboration and employment of consultants.
- Function as Policy support to Central Government in various sectors of Plant Protection, IPM, Pesticides Management, Plant Quarantine, Bio-security, SPS, Market access issues etc.

2.2 Indicate year-wise outputs/deliverables in a tabular form

S.No.	Name of the Components	2017-18	2018-19	2019-20	
1.	Strengthening and Modernization of Pest Management Approach in India (SMPMA)				
	A.	Integrated Pest Management (IPM)			
	1	Sample roving pest survey (in lakh ha.)	9	9	10
	2	Bio- control activity			
	(i)	Lab production &Field releases of Bio-control agents (in millions)	2200	2200	2250
	(ii)	Area coverage by Augmentation (in lakh ha.)	9	9	9.1
	(iii)	Area coverage by conservation (in lakh ha.)	8.5	8.5	8.7
	3	IPM training- cum- demonstration			

	(i)	No. of Farmers Field School (FFSs)	818	910	1044
		No. of farmers trained	28630	31850	36540
	(ii)	2 day programme	160	182	222
		AEOs, NGOs, Lead Farmers, Private Entrepreneurs etc.	6400	7280	8880
	(iii)	5 day programme	26	32	42
		AEOs, Pesticide dealers, NGOs, Lead Farmers, Private Entrepreneurs etc.	1040	1280	1680
	(iv)	SLTP (30 days) No. of SLTP	5	6	8
		No. of Master Trainer trained	200	240	320
	B.	Locust Control & Research			
	(i)	Survey/ surveillance (lakh ha)	150	150	150
	(ii)	Fortnightly Locust Bulletin	24	24	24
	(iii)	Indo-Pak border meetings	6	6	6
	(iv)	Locust awareness training	20	20	20
	C.	Central Insecticide Laboratory(CIL)			
	(i)	Chemistry	1300	1450	1600
	(ii)	Bioassay-Chemical Pesticide	70	75	80
	(iii)	Medical Toxicology	20	25	30
	(iv)	Packaging & Processing	75	110	150
	D.	Two Regional Pesticide Testing Laboratories (RPTLs)			
	(i)	Chemical Pesticides (capacity -1500 each)	2500	2700	3000
	(ii)	Bio-Pesticides	500	1000	1500
2.		Monitoring of Pesticide Residue at the National Level (MPRNL)			
	(i)	Monitoring of pesticide residues in food commodities	21,500	22,500	23,500
3.		National Institute of Plant Health Management (NIPHM)			
	(i)	No. of Programmes to be conducted	120	135	150
	(ii)	No. of persons to be trained	2400	2700	3000

2.3 Indicate Outcomes of the Scheme in the form of measurable indicators which can be used to evaluate the proposal periodically. Baseline data or survey against which such outcomes should be benchmarked should also be mentioned.

The outcomes of the various components of SMPPQ are as follows:

I. Strengthening and Modernization of Pest Management Approach in India (SMPMA)

a) Integrated Pest Management:

- Surveys conducted by the CIPMCs
- Release of Bio Control Agents
- Area Coverage by Augmentation and Conservation
- Human Resource Development Programme, namely 2 and 5 days IPM orientation programme, Seasonal Long Training Programmes (SLTPs) and Farmers Field Schools
-

b) Central Insecticides Board & Control (CIB&RC)

- Issuing of certificates of registration after approval by the RC
- Dealing with the cases for inclusion of new insecticides in Schedule to the Act
- Organizing CIB Meetings for deciding policy issues and RC meetings for grant of registrations, endorsements, Export registration certificates and import permits.

II. Strengthening and Modernization of Plant Quarantine Facilities in India (SMPQF)

- **Implementation of PQ Order:** The global trade in plants and plant material has been increasing substantially due to liberalization under WTO regime. Accordingly, the import/exports of agricultural commodities have increased with the enhanced risk of introduction of exotic pests and diseases into India. Therefore, the Plant Quarantine (Regulation of Import into India) Order, 2003 is being implemented to minimize the risk to the agricultural bio-security of the country.
- **Development of Pest Risk Analysis (PRA):** In line with the provisions as per para-3(7) of PQ Order 2003 the import of plants and plant material into the

country is subject to the Pest Risk Analysis so as to arrive at the phytosanitary requirement. Accordingly, additional commodities have been added to the PQ Order 2003 with due Pest Risk Analysis under appropriate Schedule of the Order. As such more than 123 PRAs have been conducted to facilitate risk free imports.

- **Export market access:** Efforts have been made to provide scientific and technical information on the Indian agricultural produce, required for finalization of PRAs by the importing countries. Technical information for export of 79 commodities have been furnished for their market access to 52 countries mainly are Argentina, Australia, Equador, Bangladesh, Myanmar, Canada, China, Chile, Columbia, Costa Rica, South Korea, Malaysia, Egypt, Israel, New Zealand, Peru, Russia, South Africa. Market access for export of grapes to Australia, Canada and USA; Mango to Japan, New Zealand, South Korea, Mauritius and USA; Walnut to Chile and South Korea; Banana to South Korea and Pomegranate to USA have been achieved.
- **Development of National Standards:** Twenty two National standards have so far been developed in line with the International Standards for Phytosanitary Measures to strengthen the implementation of phytosanitary measures in the country; to accredit treatment facilities and to identify pest-free areas in the country by survey and surveillance methods to enhance the market access of export of pest-free Indian agricultural commodities. Besides, Standard Operating Procedures for export certification, Post-entry Quarantine Inspection, Export of Basmati rice to USA have been developed and implemented for pest-free exports as per the phytosanitary requirements of the importing countries. Further, NSPM-6 (Technical auditing of Plant Quarantine Stations), NSPM-9 (Approval for Forced Hot Air Treatment facilities) and NSPM-12 (Guidelines for Accreditation of Pest Control Operators for use of Methyl bromide) have been revised.
- **Strengthening of existing PQ Stations:** The existing 57 plant quarantine stations were strengthened and left over to be equipped more.
- **Online message exchange with Customs:** The online message exchange system connectivity under single window system between Customs ICEGATE and Plant Quarantine Information system has been completed at in PQ stations to reduce the timeline and efficient paperless working.
- **International Standard for Phytosanitary Measures-15 (ISPM-15):** In compliance to the ISPM-15 of International Plant Protection Convention, India has developed two national standards for accreditation of treatment facilities of Wood Packaging Material. So far, 581 MBr, 454 ALP and 430 FHAT such treatment providers have been accredited for Methyl bromide fumigation, Aluminium Phosphide and Forced-Hot Air Treatment.

- **Acquiring of land for permanently housing PQ Stations:** Land has been acquired for PQ stations at JNPT Mumbai, Bangalore, Haldia, Kandla and Visakhapatnam. Construction work has been completed at Bangalore and Vishakhapatnam whereas the preparation of building estimates for office buildings is underway for PQS, JNPT, Kandla and Haldia.
- **Establishment of National Centre for Agricultural Bio-security (NCAB) and National Agricultural Bio-security Network (NABN):**In line with the XI Plan EFC proposals the National Centre for Agricultural Bio-security has been established. Further, the National Agricultural Bio-security Network has also been established to facilitate scientific partnership among various existing institutions in public, private, academic and civil society sectors engaged in bio-monitoring, bio-safety, quarantine and other bio-security programmes.
- **ISO Certification and NABL Accreditation of Plant Quarantine Stations/Residue Monitoring Laboratories:** The National Plant Quarantine Station, New Delhi and Regional Plant Quarantine Station, Amritsar, Chennai, Kolkata and Mumbai have been awarded the ISO Certification. The Plant Quarantine Station, Tuticorin, Bongaon, Kandla are also declared ISO certified during the plan period. Besides, the Residue Monitoring Laboratory at NPQS, New Delhi, RPQS, Chennai and RPQS, Mumbai have achieved the NABL accreditation.
- **Implementation of Plant Quarantine Information System for On-Line plant quarantine activities:** On-line system for all the plant quarantine activities like phytosanitary certification, issuance of import permit and issuing release orders for imported consignments has been implemented. The importers and exporters are required to register themselves through the on-line system for any of the above PQ activities. A data-base is generated through the system which can be viewed and monitored.
- **Centralized supply of pre-printed stationary:** The Phytosanitary certificates are issued as per the International Plant Protection Convention 1951 in a prescribed format. To maintain the uniformity in the Phytosanitary certificates issued by more than 182 notified PSC issuing authorities in the country, the PSC forms are printed at central level with security features. Similarly, the import permit forms which are also a international document being provided to NPPO of the exporting country are also printed centrally along with release orders.

III. National Institute of Plant Health Management (NIPHM)

The Monitorable parameters of the scheme are given below based on which the achievements could be assessed:

<u>S.No</u>	<u>Monitorable parameter</u>	<u>Output</u>	<u>Outcome</u>
1(a)	Human Resource development, both in public and private sector, covering areas inter alia, of plant protection technology, plant quarantine and bio-security, crop oriented Integrated Pest Management approaches, quality testing of pesticides and monitoring of pesticide residues for monitoring the quality status of pesticides.	<ul style="list-style-type: none"> i) 80 training programmes will be organized to fulfill the objective, training 900 extension functionaries' /directorate officials / employees of private sector such as pest control operators, accredited agencies/ farmers etc. in the area of Plant Health Management, Bio security & Plant Quarantine. ii) 150 Training programs will be organized during plan, to train 2000 pesticide analysts / officers from GOI / state governments / other analysts in quality control of pesticides and pesticide residue analysis, Training & consultancy on NABL / accreditation of pesticides testing laboratories. iii) HRD in the area of 'Pesticide Application Technology' for Officers of various Central and State Govt. organizations as well as NGOs, KVKs, and Private sector (45 programmes to train 850 officers). iv) Organize 160 programmes to train 3100 State Agricultural officers in AESA based PHM. v) Organize 35 capacity building programmes in Rodent/ Vertebrate Pest Management to train 700 officials in Vertebrate Pest Management. 	<ul style="list-style-type: none"> i) Improved efficiency in providing farmer oriented advisories in plant health management matters through organizing farmers' field schools. ii) Improved efficiency in discharging plant quarantine functions by the Directorate officials thus bringing uniformity in inspection and interception and thus ensuring prevention of entry of exotic and quarantine pests & diseases. iii) Improved surveillance and generation of data for better decision making on pest control, prevention, and Biosecurity measures. iv) Reducing the incidence of pesticide residues in agricultural produce through promotion of AESA based Plant Health Management & promotion of safe & judicious use of pesticides. v) Improved sampling and analysis for ensuring the manufacture & availability of good quality pesticides. Improved detection of spurious pesticides. vi) Enabling monitoring of the pesticide residues in agricultural commodities

1(b)	Develop need-based field programmes for training and retraining of senior and middle level functionaries for executing plant protection programmes and using training of trainer approaches to ensure maximum reach of programmes.	b) Organize 30 Induction & Refresher training programmes for 480 officers of Directorate of PPQ&S. These programmes will also be extended to the officers of the State Governments. NIPHM will organize 34 need based field training programmes in which 700 progressive farmers will be trained.	by the State Testing Laboratories.
1(c)	Identify, appreciate and develop modern management tools, techniques in problem-solving approaches and utilizing the mechanism of personnel management, resource management, input management and finally conflict management at the organization level.	c) Exposure of long term participants to modern modern management tools, techniques in problem solving approaches, efficient utilization of local resources and input management and conflict resolution for effective functioning of non-formal organizations such as Farmer Field Schools and efficient functioning of respective formal organizations of the participants.	i) Improved functioning of Farmer Field Schools and empowerment of farmers in decision making through experiential learning. ii) Improved Human Resources Development for rational decision making.
2	Function as a nodal agency/ forum for exchange of latest information on plant protection technology.	Incorporation of latest advancements in Plant Protection and Plant Health Management in capacity building programmes for Extension Officers and Scientific Officers of SAUs / ICAR.	Continuous updating of knowledge among Agricultural Extension Officers & Scientists in the fields of Plant Health Management, Plant Biosecurity and Pesticide Management..
3	a) Serve as repository of ideas and develop communication and documentation services at national, regional and international level, in regard to the subject of plant health management. b) Collect and collate information on plant protection technology for dissemination among the State Extension functionaries and farmers.	i) Nationwide Networking system for Pest Surveillance. ii) Creation of Central e-pest database and establishment of a National Plant Pest Diagnostic facility and Video conferencing facility	Improved surveillance & diagnosis of pests and identification of pest specific endemic areas & Pest free areas to strengthen pest management approaches based on e-pest database & to address market access issues.
4.	a) Develop systematic linkages between state, regional, national, and international institutions of outstanding accomplishments in the field of plant protection technology.	a) Networking with Organizations of repute in the related fields such as State Agricultural Universities, ICAR Institutions, etc at national level.	Enhanced dissemination of latest advancements among the agricultural students and Scientists of SAUs / ICAR, and among the Agricultural

	b) Forge linkages with national and international institutions and create networks of knowledge sharing through a programme of institutional collaboration and consultancy.	b) International Institutions for constant review of the developments in Plant Health Management, Biosecurity & Pesticides Management sectors through the collaboration compilation of relevant advancements in Plant Protection Technology and faculty exchange programmes for capacity enhancement.	Extension Officers & in turn to farmers by the Master Trainers.
5.	Provide feedback to training programmes, conduct programme-oriented research in the area of Plant Protection, Integrated Pest Management, Pesticide Management Plant Quarantine and Pesticide delivery systems and residues.	a) Undertake evaluation studies of the policy interventions relating to IPM, Pesticide Management and Biosecurity. b) Implementation of Policy Oriented Research & Development projects on various issues of plant health management, Biosecurity and plant quarantine.	a) Provide feedback for updating of various programmes. b) Provide inputs for new policy initiatives of DAC will emanate from NIPHM in the areas of Plant Health Management, Biosecurity & Incursion Management, and Pesticide Management.
6	Provide policy support to the central government in various sectors of plant protection including IPM, pesticide management, plant quarantine, bio-security, SPS and market access issues.		
7	Gain overall insight into plant protection systems and policies together with operational problems and constraints at each step and stage.		

- The outcomes indicated are not directly quantifiable, as the institution is engaged in Capacity building of Trainers.

IV. Monitoring of Pesticide Residue at the National Level (MPRNL)

- Monitoring of pesticide residues in food commodities such as vegetables, fruits, cereals, spices, pulses, milk, fish, meat, tea from various Agriculture Produce Marketing Committee (APMC) markets, farm-gate, organic outlets, retail outlets, Public Distribution Systems (PDS) and irrigated water samples from various parts of the country.
- On the basis of Monitoring data, conducting GAP trials for fixation of Codex MRL and for CIB & RC for the fixation of MRL, safe waiting period and approval of label claim. A total of 833 were planned for fixation of label claim. Out of which 625 trials have been completed; 208 trials are in progress.

- Laboratories will continue to maintain their accreditation by NABL for ISO/IEC 17025:2005 in the field of Pesticide Residue Testing.
- The laboratories will regularly participate in National and International ILC and PT programmes like FAPAS to assess their technical competence.
- Standard operating protocols (SOP) will be developed for determination of pesticide residues in food commodities and environmental sample
- Providing training in Pesticide residue analysis to build Human Resource Development and capacity in the field of pesticide residue analysis
- Yearly workshop of the will be conducted to evaluate the progress of the scheme
- Annual and monthly reports will be submitted to DAC on regular basis for further necessary action.
- The steering and technical committee will be conducted to review the progress of the scheme.

2.4 Indicate other schemes/sub-schemes being undertaken by Ministries/ Departments which have significant outcome overlap with the proposed scheme. What convergence framework has been evolved to consolidate outcomes and save public resources?

NOT APPLICABLE

3. Target Beneficiaries

3.1 If the scheme is specific to any location, area and segment of population, please give the details and basis for selection.

It is not a location specific scheme and will be open to all States and Union Territories

3.2 Please bring out specific interventions directed in favour of social groups, namely SC, ST, differently abled, minorities and other vulnerable groups.

SMPPQ is not directed towards any social groups.

3.3 If the scheme has gender balance aspects or components specifically directed at welfare of women, please bring them out clearly?

SMPPQ has no gender specific components. However, women participation will be encouraged.

3.4 Please bring out special interventions, if any, in North East, Himalayan LWE, Island territories and other backward areas.

NOT APPLICABLE

3.5 In case of beneficiary oriented schemes, indicate the mechanism for identification of target beneficiaries and the linkage with Aadhar/UID numbers.

Under SMPMA component, Farmers Field Schools are organized to sensitize farmers about plant protection management. The participants of these FFSs will be linked to their Aadhar/UID numbers.

3.6 Wherever possible, the mode of delivery should involve the Panchayati Raj Institutions and Urban Local Bodies. Where this is intended, the preparedness and ability of the local bodies for executing the proposal may also be examined.

Farmers Field Schools (FFSs) conducted under SMPMA are organized under the supervision of the panchayats.

4. Cost Analysis

4.1 Cost estimates for the scheme duration: both year wise, component wise segregated into non-recurring and recurring expenses.

(Rs. in Crores)

S.No.	Name of the Components		2017-18			2018-19			2019-20		
			Recurring	Non – Recurring	Total	Recurring	Non – Recurring	Total	Recurring	Non – Recurring	Total
1.	Strengthening and Modernization of Pest Management Approach in India (SMPMA)										
	A.	Integrated Pest Management (IPM)	64.2399	16.5800	80.8199	83.0990	13.7500	96.8490	113.9890	14.7000	128.6890
	B.	Locust Control & Research	18.9020	2.1800	21.0820	20.7350	1.8100	22.5450	24.1780	1.8300	26.0080
	C.	Implementation of Insecticides Act (IIA)									
	(i)	Central Insecticides Board & Control (CIB&RC)	5.1450	2.5000	7.645	10.1515	12.8500	23.0015	24.1994	18.9000	43.0994
	(ii)	Central Insecticides Laboratory (CIL)	3.36	7.00	10.36	3.75	1.50	5.25	4.03	1.50	5.53
	(iii)	Techno-Legal Cell (TLC)	15.9319	11.768	27.6999	17.5791	29.12	46.6991	19.9725	43.64	63.6125
	(iv)	National Pesticides Reference Repository (NPRR)	4.9152	4.64	9.5552	5.4225	9.985	15.4075	5.9175	0.64	6.5575
	(v)	National Pesticides Investigation Laboratory (NPIL)	4.6041	4.4920	9.0961	4.6641	7.783	12.4471	5.4175	0.64	6.0575
2.	Strengthening and Modernization of Plant Quarantine Facilities in India (SMPQF)		37.52	19.29	56.81	124.2649	42.14	166.4049	142.3682	24.142	166.5102
3.	Monitoring of Pesticide Residue at the National Level (MPRNL)		22.5	65.0	87.5	24.5	11.6	36.1	26.5	11.6	38.1
4.	National Institute of Plant Health Management (NIPHM)		18.0044	13.7800	31.7844	19.6663	17.3200	36.9863	21.4871	5.3900	26.8771
	TOTAL (rounded off)		195.12	147.23	342.35	313.8324	147.858	461.69	388	122.982	510.982

4.2 The basis of these cost estimates along with the reference dates for normative costing.

The SMPP&PQ Scheme had a B.E of Rs.130.90 Crores and Rs.151.36 Crores in the year 2015-16 and 2016-17 respectively., which shows an increment of 15 %. The division has taken an increment of 20 % for the recurring activities. In addition, various new proposal has been proposed in the non-recurring head such as Procurement of equipments for various laboratories of the Directorate, establishment of new Central Integrated Pest Management Centres (CIPMCs), establishment of Plant Quarantine Stations etc. with an aim to extend the geographical reach for efficacious functioning of the mandate. The details of important activities including ongoing and new are as follows:

1. Strengthening and Modernization of Pest Management Approach in India (SMPMA)

1A. Integrated Pest Management (IPM)

Integrated Pest Management (IPM) is an eco-friendly approach which aims at keeping pest population at below economic threshold levels by employing all available alternate pest control methods and techniques such as cultural, mechanical and biological with emphasis on use of bio-pesticides and pesticides of plant-origin like Neem formulations. The use of chemical pesticides is advised as a measure of last resort when pest population in the crop crosses economic threshold levels (ETL). The details of the component is at **Annexure-I**. The cost estimates of the component are at **Annexure III**. The following are the important activities proposed to be undertaken:

- a. **Establishment of 15 New Central Integrated Pest Management Centres (CIPMCs):** At present, there are 35 CIPMCs established across 29 States and one Union territory. These CIPMCs, inter alia, undertake surveys for pest monitoring and surveillance, organizes Farmers Field Schools & Human Resources Development programmes and produce bio-control agent for releasing them into fields. Total 3239 Nos. of Farmers Field Schools (FFSs) have been organized wherein 97170 farmers were trained. An area of 42.49 lakh have been covered under pest monitoring surveillance and 10286.21 million bio-control agents have been released on field crops in different States for controlling different pests and diseases. Total 800 Officer from State Agriculture Department were trained as a master trainer in different crops like Rice, Cotton, Vegetable, Fruit Crops, Ground nut, Mustard, Soybean, Gram, Tur, Chilli & Sugarcane through 20 Nos. of Season Long Training Programmes. Total 582 trainings of 2-days and 77 Nos. of 5- days HRD programmes were organized through which 26360 AEOs/Pesticides Dealers/ NGOs/ Progressive Farmers trained in these programmes and sensitized to reduce the use of

chemical pesticides by encouraging good agricultural practices (GAP). IPM package of practices of 87 major crops have been developed which are available on the DAC& FW and Directorate of PPQ&S website. In addition, the existing CIPMCs played an important role in successfully managing the following pests:

- Whitefly (*Bemisia tabaci*), Sooty mould, & Leaf curl virus in Cotton growing areas of Punjab
- New pest, Rugose Spiralling Whitefly (RSW), *Aleurodicus rugioperculatus* Martin, on Coconut palm in Tamil Nadu & Kerala.
- Rice swarming caterpillar (*Spodoptera mauritia*) in rice growing areas of Assam
- South American Pinworm (*Tuta absoluta*) in tomato growing areas of Maharashtra
- Pink bollworm (PBW) on cotton crop in the States of Gujarat, Maharashtra, Andhra Pradesh, Telangana and Karnataka
- Panama wilt in Banana growing areas of Bihar
- Wheat Blast disease in border area of Bangladesh in West Bengal.

At present, the existing CIPMCs are unable to cover the whole State due to large geographical areas of States. In order to expand their geographical reach within State, 15 new CIPMCs are proposed to be established. The details of proposed CIPMCs are at **Annexure III-A**. These CIPMCs will be established on rental buildings. Simultaneously, the concerned State Government will be requested to provide land for establishment of permanent offices of CIPMCs. Accordingly, adequate provision has been made in the budget outlay.

- b. **Modernization and Strengthening of Bio-control Laboratory and Mass Production Unit:** Each CIPMCs is already engaged in production and Mass multiplication of bio-control agents viz. *Trichogramma* spp., *Chelonus blackburni*, *Epiricania melanoleuca*, *Chrysoperla* spp. etc. for subsequent release in farmer's fields and for demonstration purpose. However, the number of bio-control agents produced is not sufficient to cover the whole state and for distribution among farmers spread over different locations. Therefore, some additional equipments are to be procured for Modernization and Strengthening of all CIPMCs Lab for mass production units, so as to facilitate and ensure sufficient number and quality bio-control agents to the farmers. In addition, equipments are to be procured for the proposed new 15 CIPMCs. The details of the equipments are at **Annexure III-B**.

- c. **Organization of Farmers Field Schools (FFSs) and Other Human Resources Development programmes:** The CIPMCs, inter alia, organizes FFSs to sensitize farmers about the pest management. In addition, CIPMCs undertake two and five days IPM orientation programmes for State extension functionaries and other Stakeholders. Further, CIPMCs conducts Season Long Training Programmes (SLTPs) for State agriculture officers, extension officers, etc. The proposed cost norms of FFSs, 2 days Orientation Programmes, 5 days Orientation Programmes and SLTP after revising them for inflation and sufficing certain items as per the need felt in the previous years are at **Annexure III-C, III-D, III-E & III-F** respectively.
- d. **IPM Seva Kendra :** It is proposed to established IPM Seva Kendra at least one in each district by the progressive farmers under the jurisdiction of the CIPMCs with the mandate of production and to ensure availability of IPM inputs like bio-control agents, light traps, rodent traps, Pheromone traps, Sticky traps, Nuclear Polyhedrosis Virus (NPV), bird perture, seed treatment drum, Neem seed Kernal extract, cattle dung, ash etc. to the farmers of their vicinity and development of entrepreneurship of the farmers & promoting rural employment. The CIPMC will provide classroom and practical training of three months in each season for the crops grown in that area. A stipend of Rs. 5000 per month will be given to the trainee. A financial assistance of Rs. 25000 (maximum) for purchasing of equipment will also be provided. The details are at **Annexure III-G.**
- e. **Creation of Posts for CIPMCs:** A total of 195 posts are proposed for creation in the three-year period. These are necessary for effective functioning of the CIPMCs (including the proposed 15 New CIPMCs). Adequate provision for the same has been made in the proposed budget outlay. The details of the posts are at **Annexure III-H.**
- f. **Procurement of Vehicles:** At present, the Directorate of Plant Protection Quarantine & Storage (DPPQ&S) has 35 CIPMCs established across the country. The vehicles are very old mostly purchased between 1990 to 1995. In current year, it is essential to purchase 24 new vehicles in replacement of the old vehicles in the existing CIPMCs and 15 vehicles for newly proposed CIPMCs.
- g. **Grant-in-Aid for Establishment/Strengthening of State Bio-Control Laboratory:** In order to promote non chemical intervention to pest management, the Department provides financial assistance to the States in form

of Grant-in-Aid for establishment/strengthening of Bio-Control Laboratory. The Funding pattern for SBCL is at **Annexure III-I**.

1B. Locust Control & Research

Locust Warning Organization is aimed to detect the local breeding in Scheduled Desert Areas and incursion of exotic locust swarms into India. LWO keeps itself abreast with the prevailing locust situation at National and International level through periodically Desert Locust Bulletins of FAO issued by the Desert Locust Information Service (DLIS), AGP Division Rome, Italy. Survey data are collected by the field functionaries from the fields which are transmitted to LWO/ locust circle offices (LCOs), field HQ Jodhpur and Central HQ Faridabad where these are compiled and analyzed to forewarn the probability of locust upsurges and outbreak. The details of the component is at **Annexure I** The cost estimates of the component are at **Annexure IV**. The following are the important activities proposed to be undertaken:

- a. **Procurement of Vehicles:** There are 11 Locust Control offices, who conduct surveys of more than 2 lakhs kilometer hectare every month. At present they have 45 vehicles which are more than 20 years old. Therefore, adequate provision has been made to procure new vehicles in place of old ones. The details of the vehicles are at **Annexure IV-A**.

1C. Implementation of Insecticides Act (IIA)

1C (i) Central Insecticides Board & Control (CIB&RC)

Registration of pesticides is mandatory, by every person desirous of importing or manufacturing them, under Section 9 of the Act, by a Registration Committee (RC), constituted under Section 5, to ensure their efficacy and safety to human beings, animals and environment. A Secretariat for the CIB and the RC has been established under Section 8 of the Act, to examine the applications as per the guidelines of the RC framed under Section 5(5), besides allied correspondence and other work. The details of the component are at **Annexure I**. The cost estimates of the component are at Annexure V. The following are the important activities proposed to be undertaken

- a. **Strengthening of ongoing activities:**
The CIB&RC component of “Implementation of Insecticides Act” under umbrella Scheme “Strengthening and Modernization of Pest Management Approach” deals in grant of registration of pesticides in the country through enforcement of Insecticides Act and Rules thereunder. The use of Pesticides including Bio-pesticides in the country is increasing with fast pace as indicated by the fact that the average pesticide use was 15 gm/hectare during

1955-56 has risen to 450 gm/hectare 2014-15. However, this consumption is still at a lower end as compared to the per hectare consumption of Pesticides in some of the developed countries which is more than 1.5 kg/ha. Furthermore, the increasing trend in the registration of Pesticides in the country is also established by the fact that the number of pesticides registration issued during 2010-11 to 2012-13, a three years' period, was 11,718 whereas this number jumped 64,070 during next three years' period of April 2013 to March 2016. Though there is a phenomenal rise in the registration of pesticides during last 3-4 years, no additional manpower has been sanctioned. Considering the inherent toxic nature of the pesticides, the evaluation process takes time as the safety of human beings, animals and environment is at stake besides the efficacy of the product. As such, the toxicological evaluation of a new pesticide molecule application may take up to one month. Similarly, the critical evaluation is also carried out by the Chemistry, Bio-efficacy, Packaging and Legal Experts to ensure the safety and efficacy of the product before it is registered for use in the country. This has resulted in pendency of application for registration of pesticides in the CIB&RC thereby delaying/denial of new age pesticides (both Chemical and Bio-pesticides) to the Indian farmers. In view of above, it is imperative to strengthen the existing manpower with appropriate expertise to cope up with the increasing trend of registration and speed up the registration process in the country. The financial implication for strengthening of ongoing activities is to the tune of Rs. 371.01 Lakh (**Annexure V-A**)

- b. **Creation of International Cooperation Cell:** International trade in India as well as domestic trade in insecticides is governed by the Insecticides Act, 1968 which essentially regulates import, manufacture, sale, transport, distribution and use of insecticides. Agrochemical is generally chemicals used to kill and prevent pests that seem to cause harm to plants or animal life. Agrochemicals are used for agricultural and non-agricultural purposes like industrial use and House Hold purposes. Non-agricultural purposes include indoor plants, nurseries and animal husbandry, while industrial use involve treating of paints, rubber, leather, oil, paper to name a few and making of frit tiles, glass etc. At present pesticide administration is concern about farm-product safety, increasing demand for eco-environment protection and new requirements for pesticide control brought forward by India's accession to the WTO. Under the new situation and tasks, in terms of guiding principles, pesticides administration has been transformed from emphasizing on quality management to focusing on both quality and safety management; CIB&RC has included in its priorities supervision of pesticide manufacturing, guidance

on pesticide application in a scientific manner and pesticides residue monitoring. Newer and safer molecules are introduced very often. Some of the new molecules are introduced in India at par with the Developed countries. Pesticides demand has increased manifold and export of pesticides from India has also grown remarkably. Hence it is proposed to encourage the export of pesticides while establishing a separate International Cooperation Cell. India is member country of International treaties/Protocols like Montreal Protocol, Codex Alimentarius Commission, WHO, Rotterdam convention, Basal convention and other treaties. International Cooperation Cell will look into the various issues arising out of newer trends in pesticides and enhance cooperation with our trading partners for safe export and import of pesticides. The activities under these international conventions/agreements are not only important from safety of human beings/environment in the country but also impact import and exports of pesticides. Therefore, an exclusive Cell with expertise is imperative for effective participation in the international platform to safeguard the national interest. The financial implication for creation of the cell is to the tune of Rs. 165.35 Lakh.

- c. **Creation of a National pesticides e-portal (with linkage to stake holders):** In the age of digitization, information is the pillar of development. The pesticides are toxic substance and regulated through Insecticides Act, 1968. The substantive, financial and administrative implication required a new sharing of responsibility between the Union Government and the States along with the pesticides manufacturers. While the role and responsibility of the States in implementing of the Insecticides Act, 1968 are crucial, the Union Government accepted a larger responsibility of reinforcing the national and integrated approach in effective implementation of Insecticides Act, 1968, maintaining quality and standards. The Central Government continues to play a leading role in the evolution and monitoring of policies and programs in plant protection. A National System of collating, analyzing and disbursing of information in the implementation of Insecticides Act, 1968 to bring about uniformity is the need of the hour. The National pesticides e-portal will play a pivotal role in reviewing the impact of pesticides, quality control of pesticides, prosecution of defaulters, production and consumption of pesticides, quantity manufactured indigenously and imported etc. to see demand and supply of the pesticides. This will function through appropriate mechanisms created to ensure contacts with, and coordination among, the various areas of human resource development, stake holders. The effort will link the grant of registration by the CIB&RC and issuance of license by the concerned State Government Authorities. National pesticides e-portal shall

function as a repository of vast and diverse contents on pesticides. It is imperative that these varied entities contribute the content in a standardized format so that consistency of the content on the National pesticides e-Portal of India is ensured for the benefit of various stakeholders including industry, researchers, managers, policymakers besides farmers. Such measure will not only facilitate an effective access by the citizens but also enable an electronic exchange of information. The primary objective of this content framework is to ensure that the contributors, belonging to any constituent of the Government at any level, contribute content in a pre-set standardized format through a Content Management System (CMS). These contents contributed using the CMS are fed into a Centralized content repository for public use. This will work as a boon for the pesticides industry and farmers of India in ensuring all related information at one point. The financial implication for creation of the National Pesticides e-portal cell is to the tune of Rs. 171.93 Lakh.

- d. **Creation of an Environment Impact Study Cell:** Pesticides are poisonous substances. Therefore, they are toxic. In view of the increasing environmental concern, it is proposed to scrutinize all applications from the angle of environment too and also study impact of their use on environment. The long term use/exposure of pesticide may lead to adverse impact on environment, human health and resistance development in the pest. The environmental impact of pesticides consists of the effects of pesticides on non-target species. Over 98% of sprayed insecticides and 95% of herbicides reach a destination other than their target species, as they are sprayed or spread across entire agricultural fields. Runoff can carry pesticides into aquatic environments while wind can carry them to other fields, grazing areas, human settlements and undeveloped areas, potentially affecting other species. Over a time, repeated application increases pest resistance, while its effects on other species can facilitate the pest's resurgence. Each pesticide or pesticide class comes with a specific set of environmental concerns. Such undesirable effects have led many pesticides to be banned, while regulations have limited and/or restricted/withdrawn the use of others. Over a time, pesticides have generally become less persistent and more species-specific, reducing their environmental footprint. In addition, the amount of pesticides applied per hectare have declined with the new age pesticide formulation. However, the global spread of pesticide use, including the use of older/obsolete pesticides that have been banned in some jurisdictions, has increased. Chemical pesticides are used worldwide to protect crops. Global resistance to chemical pesticides is growing due to toxic effects on people and the environment. The

pesticides Residues on food crops and in the environment have threaten not only human beings but also important species like honeybees. Therefore, this cell is proposed to study the impact of pesticides on environment and human and their efficacy after a certain period of registration in the country. The financial implication for creation of the Environment Impact Study Cell is to the tune of Rs. 185.29 Lakh.

- e. **Creation of Registration Compliance Assurance cell (with linkage to stake holders):** The CIB&RC issues several Certificate of Registration (CR) for manufacture, sale, import etc. of various pesticides. The CRs are issued under different sections of the Insecticides Act, 1968 with different conditions. However, the CIBRC, presently, has no mechanism in place to verify the compliance of such conditions. This situation warrants regular monitoring of infrastructural facilities available with thousands of registrants. A condition, which is invariably mentioned in the certificates of registration under section 9 (4) formulations, is that if a registrant fails to commence manufacturing of the product within a period of two years, the certificate of registration shall become invalid. As on date, there is no information on these counts. This has become important in view of reports on availability of spurious pesticides. The proposed Pesticides Management Bill also has a provision which empowers the Registration Committee to inspect premises of manufacturers to ensure compliance of conditions of registrations. Recently, the Registration Committee (RC) has decided that 'Testing Facilities' where technical data for grant of registration is sought to be generated will require prior approval of the RC and would be subjected to periodic verification. Such monitoring is not possible without additional manpower, and as such there is a justification for creation of a Pesticides Monitoring cell so as to ensure compliance of conditions of registration. The financial implication for creation of the cell is to the tune of Rs. 185.29 Lakh.
- f. **Biocide Registration Cell:** The Biocides are pesticides that are used for enhancing the quality and shelf life of paints. The use of Biocides in paint are regulated/specified with certain limits so as to ensure that such paints are safe for use to the human beings. The Registration Committee in various meetings has decided to regulate such biocides and a Sub-Committee has been constituted to develop guidelines for registration of biocides for use in paints to ensure to safety and other related matters. Since this is going to be an entirely new activity for the CIB&RC having no specialized manpower, it is proposed to create a Biocide Registration Cell. The financial implication for creation of the cell is to the tune of Rs.150.35 Lakh.

- g. **Construction of additional office space and Renovation of Building of CIB&RC:** Building of Secretariat of CIB&RC was constructed way back in nineties. At the time of construction of this building, number of applications for registration received were below 3000 in a year, whereas it has increased phenomenally now. Such a huge volume of Documents has consumed all the storage space of the office, even space for sitting of Officers/staff has been utilized for storing the huge volume of documents. It is also pertinent to mention here that many new Cells have been approved for disposing of work in a systemic manner, which is under creation. This will require additional office space to accommodate the officers/staff of these Cells. Besides, the renovation of the existing building including furnishing with modern sitting arrangement (work stations) is also required. The financial implication for this activity is to the tune of Rs. 2700 Lakh.
- h. **Establishment of a Conference Room in the Secretariat of CIB&RC:** Secretariat of CIB&RC has no facility for meetings, discussions etc. whereas the activities entail frequent visits from national and international experts to this office. Besides, internal discussions/meetings are also held up amongst the experts of CIB&RC and hence a suitable infrastructure in the form of a Conference Room is necessary. The financial implication for establishment of a Conference Room is to the tune of Rs. 350 Lakh.
- i. **Establishment of a waiting Lounge in the Sectt. of CIB&RC:** Secretariat of Central Insecticides Board and Registration Committee is working under the IA, 1968 to felicitate the speedy Registration of Pesticides for increasing the food production. Many International and National Visitors are visiting the Secretariat for exchange of knowledge, to meet the experts and discuss a various issues related to their registration applications. However, there is no appropriate visitor's room with basic amenities. Therefore, a visitor lounge is required. The financial implication for this activity is to the tune of Rs. 150 Lakh.
- j. **Procurement of computers, IT related support, photocopy machines and vehicles:** In view of the fact that most of the activities related to grant of registration of pesticides are online, there is a regular requirement of computers, server and other IT related support. Besides, voluminous agenda documents are prepared for monthly meeting of the Registration Committee. Hence, heavy duty photocopy machine is also required. In addition, the

procurement of vehicles are also proposed as the registration compliance activities as proposed shall involve visit to the pesticide industries, manufacturing plant, pesticide market etc. The financial implication for this activity is to the tune of Rs. 225 Lakh

- k. **Creation of New posts for the above mentioned new activities:** A total of 89 posts have been proposed to be created in the three year period for undertaking the above mentioned. These posts are proposed taking into account the nature of the activities to be undertaken by above mentioned cell. The details are at **Annexure V-B**.

1C (ii) Central Insecticides Laboratory (CIL)

The Central Insecticides Laboratory was established under section 16 of the Insecticide Act, 1968. CIL is a referral Laboratory which analyzes pesticides samples which are received from different Courts of Law /Govt. authority under Insecticides Act, 1968 and Rules made therein. It has four Divisions Namely Bioassay, Chemistry, Medical Toxicology and Packaging & Processing. The details of the component is at **Annexure I**. The cost estimates of the component are at **Annexure VI**. The following are the important activities proposed to be undertaken:

- a. **Procurement of Equipments:** as per international standards to test the pesticide samples for misbranding/spuriousness with high accuracy and precision (parts per trillion). The details of Equipment's are at **Annexure VI-A**.
- b. **Operationalization of Central Pesticide Analysis Information System (CPAIS):** The 12th EFC approved the implementation of CPAIS at CIL Faridabad, and two Regional Pesticide Testing Laboratories (RPTLs) at Chandigarh and Kanpur. The CPAIS aims to improve processing of testing /analysis of pesticide samples, to deliver on-line status and final report of testing/analysis of pesticide samples to the referee/sender, to generate MIS (Management Information System) reports to facilitate monitoring the activities performed by CIL and RPTLs. On-line monitoring of work of CIL & RPTLs and Maintenance of Statutory time-line by expediting the process. The Programme is under process and as per the deliberation with the NIC, additional infrastructure is required so as to make it fully operationalized. The details are at **Annexure VI-B**.

- c. **Creation of posts:** During the three year it is proposed to create 37 posts in various division of CIL namely, Bioassay, Chemistry, Medical toxicology and Packaging and Processing division of the CIL respectively. These division plays an important role in implementation of the Implementation of Insecticides Act, 1968. The functions of the division are at **Annexure I**. The details of the posts with their justifications are at **Annexure VI-C**.

1C (iii) Techno-Legal Cell (TLC)

This Cell co-ordinate the work of two Regional Pesticides Testing Laboratories (**RPTLs**) located at Chandigarh and Kanpur, established by the Central Government to supplement the resources of States/UT in monitoring quality of pesticides, where either State Pesticides Testing Laboratories (**SPTLs**) do not exist or where facilities for testing of all types of pesticides do not exist. It also facilitates in strengthening and setting up of new SPTLs and also the notification of the Central Insecticide Inspectors, coordinating their work, guide and help them in initiation of proceedings against the offenders. The details of the component are at **Annexure I**. The cost estimates of the component are at **Annexure VII**. The following are the details of the activities proposed to be undertaken:

- a. **Grants-in-Aid to the States for Establishment and Strengthening of Pesticide and Bio Pesticide testing Laboratory:** Under the SMPP Scheme Grant-in-Aid is provided to the States for establishment and Strengthening of Pesticide and Bio-Pesticide Testing laboratories. At present, there are 68 State pesticide testing laboratories (SPTLs). These SPTLs shows huge variation vis-à-vis States. For example, Tamil Nadu has 10 SPTLs, whereas West Bengal has only one. As per the Insecticides Act, 1968, ensuring quality of pesticides is a shared responsibility between Centre and State Government. It is imperative to check the sale of spurious and misbranded pesticides, as it poses danger to human, animals and plants. For example, one of the factor which intensified the attack of whitefly on cotton in 2015-16 was use of spurious pesticides. In addition, the Department is promoting use of IPM as strategy for pest management which includes, inter alia use of cultural, mechanical etc methods of pest management. Bio –Pesticides forms an integral part of IPM strategy. However, there have reports that chemical pesticides are being sold in form of bio-pesticides. Therefore, to check sale of spurious chemical pesticides and Bio-pesticides, financial assistance is provided to the States. The cost norms for the same is **Annexure VII-A and VII-B**.
- b. **Grant-in-Aid to the States for residual analysis/ detection of lacing of chemical pesticides in Bio-pesticides/Bio-products and investigational purpose:** The misuse of the pesticide is an issue which the agriculture production is facing in recent time. The excessive or misuse of pesticides poses a threat to

human health and environment. With a view to highlight the possible area or pesticide misuse the department proposes grant-in-aid to States for procurement of equipments for residual analysis/ detection of lacing of chemical pesticides in Bio-pesticides/Bio-products and investigational purpose. The details of the equipment are at **Annexure VII-C**.

- c. **Strengthening of Existing Regional Pesticides Testing laboratories and Establishment of 2 New Regional Pesticides Testing laboratories at Hyderabad and Nashik:** Regional Pesticides Testing laboratories are establishment with an aim to assist the State Government in ensuring pesticides quality. At present there are two RPTLs at Kanpur and Chandigarh, which has a combined capacity of 3100 samples. The State which does not have functional Pesticide testing laboratory sent their sample to these RPTLs for analysis. In 12th FYP, a total of 14,085 samples have been analyzed for quality. As stated above, many State Governments do not adequate facilities for ensuring quality testing. Therefore, it is pertinent that quality mechanism be strengthened. In light of the above mentioned facts, the Department has proposed establishment of two RPTLs at Bangalore and Indore and strengthening of the existing RPTLs. The equipment requirement for the existing and proposed RPTLs is at **Annexure VII-D**.
- d. **Establishment of Bio-Pesticides Testing Laboratories at Regional CIPMCs and two RPTLs:** The mandate of the CIPMCs and success stories of them in preventing spread of pests in the 12th FYP has been stated above. These CIPMCs plays an important and integral medium to facilitate dissemination of pest management information between Central and State Governments. Over the years, there has been an increase in use of Bio-Pesticides. These bio-pesticides are environmental friendly and does not poses threat to human health. However, there have been numerous reports from the State that chemical pesticides are being sold in name of bio-pesticides. With an aim to bring convergence, the department that the existing structure of CIPMCs may be utilized for testing of bio-pesticides. Therefore, it is proposed that bio-pesticides testing laboratories be established at Six regional CIPMCs (Faridabad, Nagpur, Guhawati, Kolkata, Lucknow and Bangalore). And two RPTLs (Kanpur and Chandigarh). The details of the equipments are at **Annexure VII-E**.
- e. **State of the Art Laboratory:** In order to bolster the pest management strategies, it is proposed that State of the Art Laboratories to be established in every States of the Country. These will function as ‘one Stop’ laboratory which will includes the following laboratories:

- i. Pest Diagnosis Laboratory. The Details of the equipment is at **Annexure VII-F**
- ii. Bio-Control Agents Production Laboratory. The Details of the equipment is at **Annexure III-I**
- iii. Bio-Pesticides Testing Laboratory. The Details of the equipment is at **Annexure VII-B**
- iv. Pesticides Testing Laboratory. The Details of the equipment is at **Annexure VII-A**
- v. Pesticides Residue Analysis Laboratory. The Details of the equipment is at **Annexure VII-C**

It is also proposed that apart from the basic equipment as mentioned above, an amount of Rs. 10.00 Crore will be provided to the State for the construction of the State of the Art Laboratory which will house the five above mentioned laboratories. Recurring expenses will be met by the concerned State.

- e. **Creation of Task Force:** An exclusive task force comprising officers of the Directorate, which will exclusively work for checking illegal import, manufacturing and trading/distribution of pesticides in the country is proposed. Moreover, the workload has also been increased due to the increase in the number of complaints, received in TLC and documents received from Customs in case of illegal import of pesticides for taking necessary action due to shortage of technical staff in TLC.
- f. **Creation of Post:** A total of 108 posts have been proposed for the above mentioned activities namely, establishment of two RPTLs, establishment of Bio Pesticide testing laboratory at Six Regional CIPMCs and creation of task force. The details of the posts along with their justifications are **Annexure VII-G**.

1C (iv) National Pesticides Reference Repository (NPRR)

NRPR was considered essential and approved during the XII Five Year Plan for developing, standardizing and providing Certified Reference Material (CRM)/reference standards to pesticides testing laboratories across the country for bringing uniformity in use of such standards, thereby bringing more accuracy and efficiency in monitoring quality of pesticides. Obtaining such standards is not only time-consuming but also a near impossibility at times, thereby leading to unusual delays, which leads to failure of prosecutions. The Act provides time-bound analysis of pesticides so that they could be available to the farmers at the time of need. It is proposed to bring it to functioning during

the current Plan period and will be situated at Indore. The details of the component are at **Annexure I**. The cost estimates of the component are at **Annexure VIII**. The following are the details of the activities proposed to be undertaken:

- a. **Procurement of Equipments:** Latest sophisticated instruments to analyses the pesticides of technical grade and structure confirmation of newly registered pesticide molecules. The details of the equipments are at **Annexure VIII-A**.
- b. **Renovation of the building:** Building is already available with the DPPQ&S. However, adequate provisions have been made for the renovation of the same.

1C (v) National Pesticides Investigation Laboratory (NPIL)

NPIL was considered essential and approved during the XII Five Year Plan for investigations on lacing of bio-pesticides with chemical pesticides, investigations on pesticides imported illegally, method development & validation for newly introduced pesticide molecules and randomly verifying the test results of the analysts of all pesticides testing laboratories. It is proposed to bring it to functioning during the current Plan period and will be situated at Bangalore. The details of the component are at **Annexure I**. The cost estimates of the component are at **Annexure IX**. The following are the details of the activities proposed to be undertaken:

- a. **Procurement of Equipments:** Latest sophisticated instruments to detect the pesticides at very Low level (up to ppt-parts per trillion) to match with international standards and methods. The details of the equipments are at **Annexure IX-A**.
- b. **Renovation of the building:** Building is already available with the DPPQ&S. However, adequate provisions have been made for the renovation of the same.

2. Strengthening and Modernization of Plant Quarantine Facilities in India (SMPQF)

Plant Quarantine regulatory measures in the country are operative through the 'Destructive Insects & Pests Act, 1914 (Act 2 of 1914)'. The purpose and intent of this Act is to prevent the introduction of any insect, fungus or other pest, which is or may be destructive to crops into India and the transport from one State to another. The Directorate of Plant Protection, Quarantine & Storage was established under Ministry of Agriculture (Department of Agriculture & Cooperation) in 1946 and entrusted with the implementation of Plant Quarantine Regulations issued under the Destructive Insects &

Pests Act, 1914 to prevent introduction of exotic pests. Consequent to World Trade Organization (WTO) - Sanitary and Phytosanitary (SPS) Agreement, many countries have strengthened plant quarantine facilities and developed national standards in line with international standards established by International Plant Protection Convention (IPPC). SPS agreement of WTO envisages application of Phytosanitary measures based on scientific justification. As India is a signatory to IPPC and WTO-SPS agreement, it has become important to strengthen and modernize PQ facilities for credible inspection and Phytosanitary certification to prevent entry of exotic pests and diseases into India and also to meet Phytosanitary requirements for market access of India's agricultural commodities in other countries. Government of India notified Plant Quarantine (Regulation of Import into India) Order, 2003 under which Pest Risk Analysis (PRA) of imported agricultural commodities is mandatory, to safeguard Indian agriculture. There are 57 PQ stations at different airports, seaports and land frontiers implementing PQ regulation. The details of the component are at **Annexure-I**. The cost estimates of the component are at **Annexure X**. The following are the details of the activities proposed to be undertaken:

- a. **Establishment of 16 New Plant Quarantine Stations:** The establishment of 16 PQ station is proposed with an aim to embolden the Plant Quarantine activities of the countries. With the growing trade, there is need to ensure that alien pests and insects are not allowed to enter into the country, as it may pose a threat to bio-security of the country. The recent episodes of the wheat blast in West Bengal, tuta abosulta on tomato in South, North and North West parts of the country, spiraling whitefly in coconut in southern India etc. are reminiscent of the threat posed by alien species. In addition, to check the spread of already occurring pest in specific area, domestic quarantine has to be enforced. In view of the above, the department proposes to establish 16 new Plant Quarantine Stations. The details are at **Annexure X-A**.
- b. **Major Works for the Existing PQ Station:** Out of the 57 PQ stations, 17 are functioning on rented properties. They adversely affect the functioning of the PQ Stations, as they are situation far away from the entry points (sea ports, air cargo stations, ICD and CFS) where the inspection has to be carried out. This manifest in inordinate time in travelling and therefore effects withdrawal of samples for analysis. Therefore, efforts are underway with the State and Port authorities for providing land/space for establishment of PQ Stations. The Department has received positive response from the concerned authorities. For example, the Govt. of Assam has given land on lease. Therefore, the department has made adequate provisions for the same in the budget outlay. The details are at **Annexure X-B**.
- c. **Procurement of equipment for Existing and proposed PQ Station:** For preliminary identification/ spotting of smaller insects at field level or at inspection

places and for short time storing of culture/ samples/ media etc. and identification of pathogens in the infested material of plant and plant material a number of laboratory equipments (including scanner at International airports) are needed at Plant Quarantine Stations. The details are at **Annexure X-C and X-D**.

- d. **Creation of Posts:** To meet the needs of the Plant Quarantine activities, a total of 1402 posts are proposed during the three years, out of which, 190 posts were approved in XII plan but the posts are still to be filled. These additional posts are bare minimal and essential for effective functioning of plant quarantine and implementation of programmes to the international standards and to deliver quality inspection/certification. The details are at **Annexure X-E and Annexure X-F**. The Cabinet Secretariat has directed that PQ Station functioning at International Airports for perishable cargos to provide 24X7 services. In addition, huge amount of cargos is being traded and due to insufficient staff samples could not be withdrawn for lab analysis. Accordingly, new posts have been proposed.
- e. **Procurement of Vehicles for PQ Stations:** Out of the existing 57 PQ Stations vehicles are available at only 5 PQ Stations. Moreover, the available vehicles are obsolete in condition and not in a position to run on long way in tune with the prevailing guidelines of NGT. The lack of vehicles acts as a major constraint in mobility of plant quarantine officers for timely completion of phytosanitary inspections. Therefore, one vehicle each at existing and proposed PQ station is proposed towards strengthening of PQ facilities and phytosanitary certification system at these stations. Accordingly, an amount of Rs. 3.7 Crore is proposed during plan period.

3. Monitoring of Pesticide Residue at the National Level (MPRNL)

The MPRNL Schemes monitors the pesticide residues in food commodities and environmental samples. The objective of the Scheme, inter alia is to highlight areas of possible misuse of pesticides. The report of these analysis is shared with various stakeholders (such as State Government) to undertake corrective measures. The details of the component are at **Annexure-I**. The cost estimates of the component are at **Annexure XI**. The following are the details of the activities proposed to be undertaken:

- a. **Procurement of major equipment like GC-MS/MS and LC-MS/MS for participating laboratories:** Presently the equipment at the participating laboratories are more than 10 years old based on old technology with high maintenance cost and poor sensitivity. Therefore, there is an urgent need to replace this equipment by new and advanced equipment having high degree of sensitivity (LC-MS-MS, GC-MS-MS) and selectivity to meet the international benchmark for quality data generation. Accordingly, an amount of Rs 65.20 Crores is

proposed under the plan period. The details of equipments are at **Annexure XI-A**.

- b. **Establishment of Pesticide Residue Testing Laboratory at PQ Station:** With an aim to bolster pesticide residue analysis, the Department has also proposed establishment of 8 pesticide residue testing laboratories at existing Plant Quarantine Stations. The details of the equipments proposed for the same is at **Annexure XI-B**.

4. National Institute of Plant Health Management (NIPHM)

The details of the component are at **Annexure I**. The cost estimates of the component are at **Annexure XII**. The following new activities have been proposed:

- a. **Development of Farmpedia** – A free Farming Encyclopedia (web portal), which is envisioned as a common platform and knowledge repository, exquisitely for farmers and professionals associated with farming. The information pertaining to management practices / expert knowledge / research outcomes / best practices / advisory's etc., shall be crowd sourced in a similar fashion as Wikipedia. To start with, NIPHM has already launched its Online Plant Pest/ Disease Advisory Services (OPPDAS), which received the SKOCH Award at the National Level. Buoyed by this, NIPHM has taken-up the massive task of building a prototype of free, farming encyclopedia. The "OPPDAS" service is specifically request oriented / targeted and is not a knowledge repository. The main aim of the intended project (Farmpedia) is to provide an online knowledge repository pertaining to Agriculture / Farming, which is crowd sourced. NIPHM, being a training Organization wishes to invite all agricultural organizations and its representatives in the Country to share their expertise with the end-user i.e., the farmer and also with the peers in the industry. This platform can serve as an important knowledge sharing platform which is subject to peer review and their authentications and authorizations. The information can be uploaded with pictures, references, links etc., in a WYSIWYG interface and the same shall be rendered on the portal with peer reviews, authentications, endorsements and authorizations. The content thus available on the portal can be accessed by one and all and can be adopted by them in their regular day-to-day operations. The prototype is initially being worked out with the subject content pertaining to the following; Management Practices, Farm Advisory, Crop Stages – Pests, Favourable Conditions for Pests, Plant Protection Measures, Pesticide Usage – Precautions, New Perspectives in Plant Protection, Ecological Measures in Plant Protection, Keys and Fact Sheets – India. The project duration is 2 years.
- b. **Establishment of Plant Health clinics:** Under this project plant health advisory will be offered to the farmers on Pest and disease diagnosis Promotion of

sustainable plant health management practices. Consultancy visits to the farmers field on payment basis

- c. **Establishment of 6 months certification training programme on organic farming:** In this programme, it is proposed to offer hands-on training to Agri-entrepreneurs, NGOs and young graduates on various components of organic farming to promote sustainable plant health management.
- d. **Establishment of Polyhouse:** In view of the growing interest among the farmers for poly house cultivation of vegetables and cut flowers, it is proposed to construct a poly house in half acre to organize training programmes and practical classes on poly house cultivation.
- e. **Establishment of Hydroponic System:** Hydroponic agriculture provides many benefits to the ecosystem. Being a soilless production it doesn't need herbicides or chemical pesticides and so, it positively affects human health and the environment. Moreover, commercial hydroponic food production method allows on average four times the amount of crops in the same space as traditional soil-based farming, and it can guarantee a faster growth for many kinds of crops. In order to popularize the hydroponic agriculture among the farmers and stakeholders it is proposed to establish hydroponic system at NIPHM. This system enables growing of plants in a soil less medium and uses mineral nutrient solutions to feed the plants in water.
- f. **Establishment of National Centre for PRA (Pest Risk Analysis) (NCPRA):** Pest risk analysis (PRA) is a science based tool to tackle the alien pests of concern to any nation while facilitating international trade. International standards brought out by IPPC serve as guidance for carrying out PRA. NIPHM faculty is well trained by USDA-APHIS in Pest Risk Analysis and are engaged in conducting various capacity building programs to all stake holders across India. As NIPHM faculty are experts in the area of PRA, and can provide the input in conducting the risk analysis as per the requirement of NPPO. Hence, A Nodal centre for Pest Risk Analysis at NIPHM is planned for conducting PRS for both imports, exports and also provide inputs on updating / modification of regulations to regulatory authorities. This is very important and priority activity for the benefit of country in promotion of exports and formulating regulations for imports. Funds under capital and contingencies for subscription of online databases, books, journals, and contractual manpower required.
- g. **Establishments of National Training Centre for Phytosanitary Treatments (NTCPT):** Phytosanitary Treatments often serve as one stop solution at the end

point of export and are helpful in safeguarding biosecurity and also in gaining market access. NIPHM conducting various training programs on phytosanitary treatments and related subjects and is very popular not only India but also across Asia, due to expertise in this area. The trainees from regulatory bodies, trading partners, industry are being exposed to different methods of treatments, and during last few years, officers from Bangladesh, Bhutan and Nepal also participated. It is necessary to develop National Training Centre for Phytosanitary Treatments at NIPHM as the faculty of NIPHM are nationally competent.

- h. **National Training and Analytical facility for Pesticide Quality and contaminants:** NIPHM is notified to carry out the function of Central Insecticide Laboratory (Central Gazette Notification: -- No. 521, Part II, Section 3, Sub-section (i), Dated 17 October, 2013) to analyse samples of bio-pesticides for chemical substance under the provisions of the Insecticides Act-1968. NIPHM is regularly receiving samples sent by the Insecticide Inspectors from throughout the country. The laboratory is an accredited laboratory by NABL as per ISO/IEC 17025:2005 in the field of analysis of Pesticide Formulation, Pesticide Residues in fruits, vegetables, cereals, pulses, spices and condiments and Screening of Bio products for lacing with chemical pesticides. The laboratory is planning to expand the scope of analysis to heavy metals, micotoxins, PCBs and POPs. The proficiency Testing centre of PMD is accredited by NABL as per ISO/IEC 17043:2010 for conducting proficiency testing program in the field of Chemical Testing and conducts proficiency testing in Pesticide Formulation and Pesticide Residue Analysis, and is the only lab in India to get accredited as per ISO 17043:2010. The division offers regular training programs, which mostly includes practical components, and hence there is urgent need to develop a separate facility with international standard to house different activities such as training and analysis. The basic aim to develop NIPHM as Food Safety Training Centre in Asia, and to achieve in 2 years, the building and additional staff are required.
- i. **Development and Validation of Pesticide Formulation analysis Methods (National Methods):** As on 30.10.2016, 890 insecticides are listed in schedule and 275 insecticides (pesticides) are registered in our country. Out of the 275, around 625 different formulation products are registered for use. As BIS methods are not available for all the registered products for checking of their qualities, it is proposed to take up the Method development/Method Validation for determination of active ingredients for different pesticides formulations particularly for the compounds/ formulations which have been introduced

recently. The project would be continuous, and this new activity proposed for validating the manufacturer methods and supporting CIBRC in publication of methods for testing as National Methods for Pesticide Quality Testing.

- j. **Establishment of National centre for Pest Detection and Diagnosis Centre:**
In the event of any epidemics, localized actions are seldom taken and many cases there is considerable time lag between noticing a pest, diagnosing and reporting the same, by the time the pest might have multiplied many folds and spread over large area beyond any effort to initiate any control measure. Similarly, there are many instances of new pest incursions being observed and getting out of hand within short time, causing enormous damage to the crops, such as Coffee berry borer, coconut eriophid mite, spiraling whitefly, sunflower downy mildew, papaya mealy bug, cotton mealy bug etc. Early and accurate detection and diagnosis coupled with pest surveillance on local, regional and national level is needed to predict outbreak or incursion and to initiate pest mitigation strategies. Pest diagnostic services have been developed in developed countries to address the problems of plant pest management. NIPHM prepared a plan to develop a National Centre for Pest Detection and Diagnosis Centre, as the faculty have expertise in such activities, and facilities at NIPHM are sufficient, and this project is continuous through field visits, preparation and preservation of samples, preparation of documents, documentation of reports, analysis of samples from stake holders for perfect identification using modern methods of detection etc.

4.3 In case pre-investment activities or pilot studies are being carried out, how much has been spent on these?

NOT APPLICABLE

4.4 In case the scheme involves payout of subsidy, the year wise and component wise expected outgo may be indicated.

NOT APPLICABLE

4.5 In case the land is to be acquired the details of cost of land and cost of rehabilitation / resettlement, if any.

As stated above, the State Government will be requested for providing land/space for establishment of Central Integrated Pest Management Centre (CIPMCs) and Plant Quarantine (PQ) Stations.

4.6 In case committed liabilities are created, who will or has agreed to bear the legacy burden? In case assets are created, arrangements for their maintenance and upkeep?

NOT APPLICABLE

5. Scheme Financing

5.1 Indicate the sources of finance for the Scheme: budgetary support, extra- budgetary sources, external aid, state share, etc.:

The projected requirements for next 3 years are proposed from the budgetary support of the Central Government

5.2 If external sources are intended, the sponsoring agency may indicate, as also whether such funds have been tied up?

NOT APPLICABLE

5.3 Indicate the component of the costs that will be shared by the state Governments, local bodies, user beneficiaries or private parties?

Scheme is fully funded by Central Government.

6. Approvals and Clearances

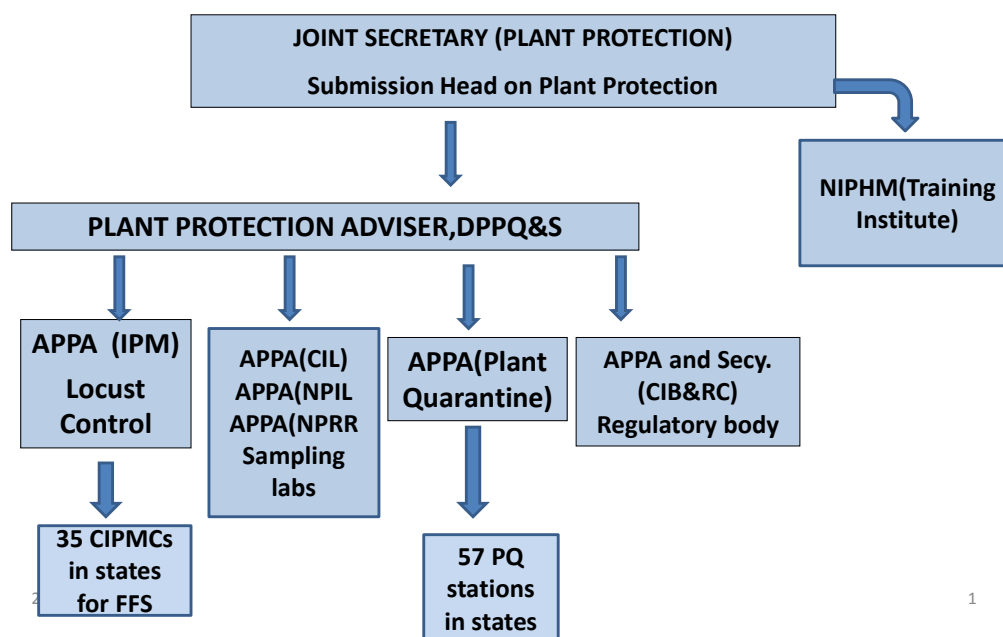
Requirement of mandatory approvals and clearances from various local, state and national bodies and their availability may be indicated in a tabular form (land acquisition, environment, forestry, wildlife etc.)

S. No.	Approvals/ Clearances	Agency Concerned	Availability (Y/ N)
NOT APPLICABLE			

7. Human Resources

7.1 Indicate the administrative structure for implementing the Scheme. Usually creation of new structures, entities etc. should be avoided

It is proposed to implement sub-mission through Plant Protection Division of the Department of Agriculture and Cooperation at the GOI level assisted by DPPQ&S,



7.2 Manpower requirement, if any. In case posts, permanent or temporary, are intended to be created, a separate proposal may be sent on file to Pers. Division of Department of Expenditure (such proposal may be sent only after the main proposal is recommended by the appraisal body)

The following posts (in various capacity) have been proposed under the various components of SMPPQ:

S.No.	Name of the component	No. of Posts
1	Integrated Pest Management (IPM) Annexure III-H	195
2	Central Insecticide Board & Registration Committee (CIB&RC) Annexure V-B	89
3	Central Insecticide laboratory (CIL) Annexure VI-C	37
4	Techno-Legal Cell (TLC) Annexure VII-G	108
5	Strengthening and Modernization of Plant Quarantine facilities in India (SMPQF) Annexure X-E & X-F	1402
	Total	1831

The details of posts at Annexure III-H, V-B, VI-C, VII-G, X-E & X-F

7.3 In case outsourcing of services or hiring of consultants is intended, brief details of the same may be provided.

Outsourcing will be done as and when the need arises as per the GFR rules.

8. Monitoring and Evaluation

8.1 Please indicate the monitoring framework for the Scheme and the arrangements for statutory and social audit (if any).

SMPMA and SMPQF: SMPMA envisages a coordinated approach for monitoring and evaluation with active involvement of implementing agencies, beneficiaries and other stakeholders. To the extent possible, 35 CIPMCs, LWOs, and 57 PQ stations will be involved in day to day implementation all in the field. At State level, State Agriculture Departments will also support the Mission interventions. Head quarter of DPPQ&S, Faridabad, RPTL Chandigarh and RPTL Kanpur will be over all responsible for implementing the schemes SMPMA and SMPQF.

Combination of periodic desk reviews, field visits, and web-based data sharing will be adopted for monitoring the progress of Mission interventions at National level. Plant Protection Division will be the nodal point in the DAC for this purpose. DPPQ&S will submit Quarterly Progress Reports (QPR) as per specified format which should reach DAC by the 10th of every third month. Similarly, the detailed Annual Progress Reports (APRs) as per specified format would be sent to the PP Division, DAC within three months after the end of the year. The Physical and Financial Progress of the Programme will be uploaded in DAC website at regular interval.

MPRNL: The central sector scheme is monitored by two committees, namely, Steering Committee and Technical Committee. The policy decisions related to the scheme are under the preview of the Steering Committee headed by the Joint Secretary (Plant Protection), Department of Agriculture and Cooperation (DAC) while the Technical Committee, headed by the Assistant Director General (Plant Protection), Indian Council of Agriculture Research (ICAR) takes care of the technical issues related to the scheme. The Project Coordinating Cell of AINP on Pesticide Residues is the nodal centre for implementation of the scheme. The Network Coordinator, All India Network Project on Pesticide Residues, IARI, New Delhi is the Member Secretary of the scheme and is the nodal person for the day to day implementation of the scheme related to financial and technical matters and submission of monthly report, annual report and need based information to the DAC.

NIPHM: Scheme implementation and day- to- day monitoring will be done by DG. However, periodic review will be carried out by the Executive Council & General Council of NIPHM under the overall supervision of DAC. The annual accounts of the Institute will be audited by the office of Accountant General, Hyderabad as approved by CAG and DAC.

8.2 Please indicate the arrangement for third party/ independent evaluation? Please note that evaluation is necessary for extension of scheme from one period to another.

The process of third party evaluation is under process.

9. Comments of the Financial Advisor, NITI Aayog, Department of Expenditure and other Ministries/ Departments may be summarized in tabular form along with how they are being internalized and used to improve this proposal.

Approval Sought:

Joint Secretary to the Government of India

Tel. no. _____

Fax no. _____

E-mail _____

i. Strengthening and Modernization of Pest Management Approach in India (SMPMA)

‘Strengthening and Modernization of Pest Management Approach in India’ is a central sector scheme which has the following components:

a. Integrated Pest Management (IPM)

IPM seeks to promote cultural, mechanical, biological methods of pest control and recommends use of chemical pesticides as a measure of last resort. The Central Government has established 35 Central Integrated Pest Management Centres (CIPMCs) of Directorate of Plant Protection, Quarantine & Storage (DPPQ&S) in 29 States and one UT. The details of the CIPMCs is at **Annexure I-A** The mandate of these Centres is to:

- conduct pest/disease monitoring
- production and release of bio-control agents/ bio-pesticides
- conservation of bio-control agents and Human Resource Development in IPM approach

Training is imparted to Agriculture/Horticulture Extension Officers and farmers at grass roots level through Season Long Training Programmes, Human Resource Development Programmes and Farmers Field Schools (FFSs). The FFS provides practical training to farmers on the principles of IPM: survey and surveillance for pests and friendly insects, use of locally available bio-control agents, cultural, physical, mechanical methods of pest control, use of bio-pesticides, effects of pesticides on natural enemies of pests and safe and judicious use of pesticides. These schools are conducted separately for the Kharif and Rabi seasons, each FFS lasting 14 weeks. In addition, Seed treatment campaign is being taken up every year since 1997 by the Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) during Kharif and Rabi seasons in active collaboration with State Departments of Agriculture. In the 12th Five Year Plan, the CIPMCs has conducted that following programmes:

S.No.	Training Programme	No. of Programmes organized in 12 th FYP i.e. 2012-13 to 2016-17	No. of Farmers/AEO, etc trained
1.	FFSs	3239	97,170
2.	2 days IPM Orientation programme	582	23,280
3.	5 days IPM Orientation	77	3,080
4.	30 days Seasonal Long Training programme (SLTPs)	20	800

In the last five years, CIPMCs played an important role in assisting State Agriculture Department by imparting skill through training programmes, by helping them to curb the spread of pest like Tuta absoluta in Tomato, Wheat blast, white fly in cotton, etc. The CIPMCs undertakes regular surveys to monitor the agriculture fields for pest/disease and bring it to the notice of the concerned State for corrective measures. The CIPMCs also suggest interventions to the State for efficacious management of identified pest.

b. Locust Control and Research

The Indian Agriculture is highly prone to Desert Locust. The Desert Locust is a trans-boundary pest which can cause irreparable damages. In order to keep the menace of locust at bay Locust Warning Organization (LWO) has been established. The Locust Warning Organization is aimed to detect the local breeding in Scheduled Desert Areas and incursion of exotic locust swarms into India. LWO keeps itself abreast with the prevailing locust situation at National and International level through periodically Desert Locust Bulletins of FAO issued by the Desert Locust Information Service (DLIS), AGP Division Rome, Italy. Survey are conducted regularly wherein data is collected by the field functionaries from the fields which are transmitted to LWO/locust circle offices (LCOs), field HQ Jodhpur and Central HQ Faridabad. The data is then compiled and analyzed to forewarn the probability of locust upsurges and outbreak. The locust situation is appraised to the State Governments of Rajasthan, Gujarat and other states with the advice to gear up their field functionaries to keep a constant vigil on locust situation in their areas and intimate the same to nearest LWO offices for taking necessary action at their end. Directorate of Plant Protection, Quarantine and Storage is responsible for adoption of suitable control strategy in Scheduled Desert Area. However, the liability of locust control in cropped areas lies with the State Government. Lot of innovations have been made in the field of locust survey and surveillance for quick transmission of locust survey data, their analysis, decision making, mapping of survey areas through computerization, adoption of new software like eLocust3 and RAMSES. In addition, India is also a member to the of FAO Commission for Controlling Desert locust in South West Asia (SWAC) and FAO Desert Locust Control Committee. In the 12th FYP, the following activities have been undertaken by LWO through its locust circle offices:

S.No.	Name of the Activities undertaken 12th FYP i.e. 2012-13 to 2016-17	Achievements
1.	Survey/ surveillance (lakh ha)	886
2.	Fortnightly Locust Bulletin	118
3.	Indo-Pak border meetings	30

c. Implementation of Insecticides Act

The Government has enacted the Insecticides Act, 1968 regulates the import, manufacture, sale, transport, distribution and use of Insecticides with a view to prevent risk to human beings, animals and for matters connected therewith. The Insecticides

Rules, 1971 have been framed under the Act. Implementation of the Act is the responsibility of both, Central and State Governments. The Central Government is responsible for registration of insecticides whereas, the State Governments are responsible for enforcement of the provisions relating to manufacture, sale, transport, distribution and use of insecticides. The Central Government and State Governments are jointly responsible for quality control. It has the following components:

1. Central Insecticides Board & Registration committee (CIB&RC)

The component deals with the implementation of the Insecticides Act, 1968, which provides for inclusion of a substance in the Schedule to the Act, so as to qualify to be an insecticide (pesticide). Substances in the Schedule to the Act are included by the Central Government on the recommendation of the Central Insecticides Board (CIB). Registration of pesticides is mandatory, by every person desirous of importing or manufacturing them, under Section 9 of the Act, by a Registration Committee (RC), constituted under Section 5, to ensure their efficacy and safety to human beings, animals and environment. A Secretariat for the CIB and the RC has been established under Section 8 of the Act, to examine the applications as per the guidelines of the RC framed under Section 5(5), besides allied correspondence and other work. The registration of safe and efficacious insecticides for the control of pests of agricultural crops, in public health and households as also to ensure the implementation of various provisions of the Act at the Central and State levels. Sectt. of CIB&RC was established with limited manpower in 1971 soon after the framing of the Rules. India initially used to import pesticides. Today, it is a hub of manufacturing of pesticides, though certain pesticides are imported too. The

2. Techno-legal Cell

Techno-legal Cell is a component of Implementation of Insecticides Act (IIA) under central sponsored scheme “Strengthening and Modernization of Pest management Approach in India” (SMPMA). This Cell co-ordinate the work of two Regional Pesticides Testing Laboratories (RPTLs) located at Chandigarh and Kanpur, established by the Central Government to supplement the resources of States/UT in monitoring quality of pesticides, where either State Pesticides Testing Laboratories (SPTLs) do not exist or where facilities for testing of all types of pesticides do not exist. It also facilitates in strengthening and setting up of new SPTLs and also the notification of the Central Insecticide Inspectors, coordinating their work, guide and help them in initiation of proceedings against the offenders. In the last 12th FYP a total of 14,085 samples have been analyzed, out of which 1,491 (10%) samples have been found misbranded.

3. Central Insecticide laboratory

The Central Insecticides Laboratory was established under section 16 of Insecticide Act, 1968 on 28th February, 1981, by Gazette Notification. Central

Insecticides Laboratory comes under Implementation of Insecticides Act. CIL is referral Laboratory which analyzes Pesticides Samples received from different Courts of Law /Govt. authority under Insecticides Act,1968 and Insecticides Rules, 1971.It has four Divisions Namely Bioassay, Chemistry, Medical Toxicology and Packaging and Processing. CIL is accredited by National Accreditation Board for Testing and Calibration Laboratory(NABL) for Biological and Chemical Testing. In the last 12th FYP a total of 4,025 samples have been analyzed, out of which 1,997 (49.6%) samples have been found misbranded. The CIL has the following four divisions:

a. CHEMISTRY DIVISION

The activities of chemistry division are:

- To analyze such samples of insecticides sent to it under the Act by any officer or authority and submission of certificates of analysis to the concerned authority;
- To carry out such investigations as may be necessary for the purpose of ensuring the conditions of Registration of Insecticides;
- To carry out such other functions as may be entrusted to it by the Central Government or by a State Government with the permission of the Central Government & after consultation with the Central Insecticides Board.
- Facilitating Bureau of Indian Standards by providing methods of analysis of pesticide Formulations and Technical
- Participating in Proficiency testing and Inter Laboratory Testing Programme with RPTLs and SPTLs.
- Hazardous Waste Management: CIL has obtained membership registration certificate from Haryana Environment Management Society (HEMS). It has executed registration agreement with GEPIL-H for five years for disposal of pesticide along with containers. CIL and GEPIL-H also signed a Memorandum of Agreement (MoA) with a validity period of 5 years. So far, more than 19.9 MT of pesticides stockpiled in various divisions of CIL has been lifted by GEPIL-H.

b. BIOASSAY DIVISION

The activities of bioassay division are:

- Post registration verification of bio-effectiveness and phytotoxicity of chemical and biological pesticides against target pests on approved crops/habitat under the Insecticides Act, 1968 for quality control.
- Pre- registration verification of bio-pesticide samples, received from CIB &RC.

c. MEDICAL TOXICOLOGY DIVISION

The Medical Toxicology Division is created in CIL in order to verify the safety claims made by the manufacturers of pesticides in the field of Toxicity Study which is also approved by EFC. This Division has to generate data and advice to the Government to take suitable course of action. In such cases, there is a need for adopting the risk management strategy in order to reduce the hazards to the human beings and the environment. For this purpose, various objectives were decided to undertake earlier like Acute, Oral/Dermal LD 50 study, Short term studies/ Sub-acute/ sub-chronic toxicity study, Chronic toxicity study, Health monitoring study training to Medical doctors on Diagnosis, Management and Treatment of Pesticide Poisoning.

d. PACKAGING AND PROCESSING DIVISION

The functions of Packaging and processing division are:

- Pre and post registration verification of packaging and labeling claims/ requirements made by the manufactures/registrants.
- 2. Pre and post verification of packaging material used in the packaging.
- Verification / analysis of the packaging and labeling samples received under section 5 (C) of the Insecticides Rules, 1971 in the context of conditions laid down on the certificate of registration issued under Insecticides Act,
- Technical guidance to the Bureau of Indian Standards, in formulating, updating and amending the standard of pesticides quality control, safety storage, transportation and use.
- Verification of shelf life data of the applicants received from the Secretariat of Central Insecticides Board and Registration Committee.
- To render technical guidance to the state department of agriculture functionaries and other Scientific bodies dealing with matters relating to the packaging, labeling, quality control, safety and other aspects of pesticides.
- Developments of eco-friendly and economical pesticides formulations packaging system / devices at laboratory scale.

ii. **Strengthening and Modernization of Plant Quarantine Facilities in India (SMPQF)**

Plant Quarantine regulatory measures are operative through the ‘Destructive Insects & Pests Act, 1914 (Act 2 of 1914)’. The purpose and intent of this Act is to prevent the introduction of any insect pest, diseases, nematodes, weeds or any other pests from abroad or from one place to another in India which is or may be destructive to crops in India. Directorate of Plant Protection, Quarantine & Storage (DPPQ&S) established in 1946 under Ministry of Agriculture & Farmers Welfare (Department of Agriculture Cooperation & Farmers Welfare) implements Plant Quarantine Regulations issued under the Act to prevent introduction of exotic pests through plant quarantine stations. Consequent to World Trade Organization (WTO) - Sanitary and Phytosanitary (SPS) Agreement, many countries have strengthened plant quarantine facilities

and developed national standards in line with international standards established by International Plant Protection Convention (IPPC). SPS agreement of WTO envisages application of Phytosanitary measures based on scientific justification. As India is a signatory to IPPC and WTO-SPS agreement, it has become important to strengthen and modernize PQ facilities for credible inspection and Phytosanitary certification to prevent entry of exotic pests and diseases into India and also to meet Phytosanitary requirements for market access of India's agricultural commodities in other countries. Government of India notified Plant Quarantine (Regulation of Import into India) Order, 2003 under which Pest Risk Analysis (PRA) of imported agricultural commodities is mandatory, to safeguard Indian agriculture. There are 57 PQ stations at different airports, seaports and land frontiers implementing PQ regulation. The details of PQ Stations are at **Annexure I-B**. In the 12th FYP the following are activities undertaken under the SMPQF Scheme.

S.No.	Activities Undertaken 12th FYP i.e. 2012-13 to 2016-17	Achievements
1.	No. of Import Permits issued	1,82,912
2.	No. of Export Phytosanitary certificates issued	15,89,058
3.	No of Non-compliance consignments	19,509
4.	Revenue realized (Rs. in crores)	889.95

iii. **Monitoring of Pesticide Residue at the National Level (MPRNL)**

The Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare had started a central sector scheme, "Monitoring of Pesticide Residues at National Level" in food commodities and environmental samples during 2005-06 with the participation of various laboratories representing Ministry of Agriculture, Indian Council of Agriculture Research, Ministry of Health and Family Welfare, Ministry of Environment and Forest, Council of Scientific and Industrial Research, Ministry of Chemical and Fertilizer, Ministry of Commerce and State Agricultural Universities across the country. As per the approved technical programme during the annual workshop of the scheme, the participating laboratories collect food commodities such as vegetables, fruits, cereals, pulses, spices, curry leaves, red chilli powder, milk, egg, fish/marine, meat, tea from various Agriculture Produce Marketing Committee (APMC) markets, local markets, farm gate, organic outlets and Public Distribution Systems (PDS) and surface water from intensive agricultural fields from various parts of the country and analyzed for the possible presence of pesticide residues. The list of participating laboratories is attached **Annexure I-C**.

Under the Department of Agriculture and Cooperation (DAC), Ministry of Agriculture sponsored central sector scheme, "Monitoring of Pesticide Residues at National Level (MPRNL)", during 2012-16, the 24 NABL accredited participating laboratories collected and

analysed a total of 76,005 samples of food commodities were collected and analysed for the possible presence of pesticide residues and 1,882 samples (2.5 %) were detected with pesticides above MRL. Coordinating centres (AINP and MPRNL) are regularly participating in the Inter laboratory (ILC) at national level and Proficiency testing (PT) at international level to ensure that quality data is generated by the laboratory and achieving satisfactory z-score.

A database of CRM was developed at the Project Coordinating Cell, New Delhi to ensure the availability of expensive CRMs in all the coordinated laboratories for smooth and uniform functioning as with the help of the database, any coordinated laboratories can have a required CRM from the other nearby laboratories. The database has been circulated with participating laboratories under AINP and DAC sponsored central sector scheme, "Monitoring of Pesticide Residues at National Level". The Project Coordinating cell distributed a total of 889 CRM solutions during last five years to centres under AINP, MPRNL and other ICAR institutes. During 2012-16, a total of 10 Refresher Group training programmes on "Pesticide Residue Analysis" have been conducted and attended by 134 participants from the coordinated centers under AINP on Pesticides Residues, Central sector scheme, "Monitoring of Pesticide Residues at National Level" and private food testing laboratories. The newly developed and validated pesticide residue analytical methods were published in first edition of Pesticide Residues Analysis Manual in 2007 and the second revised and enlarged edition during 2013 by DIPA / DKMA, ICAR. Under the project (AINP and MPRNL), 86 Parliament questions have been replied during 2010-15.

The project is actively linked with the Codex Committee on Pesticide Residues (CCPR). The monitoring data of seed spices was collected from Spices Board, Export Inspection Council and MPRNL and compiled as per the JMPR format. The data was submitted to National Codex Contact Point, India (FSSAI) NCCP, New Delhi for its onward transmission to JMPR for risk assessment and fixation of MRL. The evaluation report of JMPR was presented during the 47th session of CCPR (2015) and the MRL of dithiocarbamate have been accepted and recommended to step 5/8 at the level of 10 ppm.

iv. National Institute of Plant Health Management (NIPHM)

The Central Plant Protection Institute (CPPTI) was established in 1966 for human resource development in plant protection technology under the Directorate of Plant Protection, to create qualified pest management personnel in adequate numbers both in the Central Government and in the Departments of Agriculture of States/Union Territories (UTs), and impart training to farmers. The Institute, which was rechristened subsequently as National Plant Protection Training Institute (NPPTI), was entrusted with the responsibility of organizing both long and short duration training courses for Human Resource Development on different aspects of Plant Protection. NPPTI was one of the components of the ongoing scheme, "Strengthening and Modernization of Pest Management Approach in the Country". The Union Cabinet on 25th July 2008 gave its approval for converting National Plant Protection Training Institute (NPPTI), Hyderabad into an autonomous agency namely National Institute of Plant Health Management (NIPHM) by registering it under the Registration of Societies Act, 1860, which will enable autonomy in functioning and effective capacity building in the sector.

One of the mandate entrusted to NIPHM is to function as a policy support center in all sanitary and phytosanitary (SPS) matters, and create adequate capacity, both in public and private sectors, to meet the growing challenges of non-tariff barriers in the form of SPS issues. NIPHM is also expected to play an important role in protecting the country's agro-ecosystems from alien pests and diseases. Consequently, the Department of Agriculture & Cooperation of the Ministry of Agriculture, Govt. of India issued necessary orders for transforming this Institute into an autonomous body vide resolution F. No. 20-62/2007-PP I dated 13th October, 2008. As envisaged therein, National Plant Protection Training Institute (NPPTI) was reconstituted into an autonomous body, viz, National Institute of Plant Health Management (NIPHM) and registered (No.1444 of 2008) under the Andhra Pradesh Societies Registration Act, 2001 (Act No.35 of 2001). The Society came into being with effect from 24th October, 2008 and functions under the control of the Department of Agriculture & Cooperation of the Ministry of Agriculture, Govt. of India.

In order to promote sustainable agriculture through Human Resource Development in the agriculture sector, NIPHM is organizing different programmes to build the capacity of agriculture extension officers of Central / State Governments, Scientists of ICAR institutions and State Agricultural Universities on various aspects of Plant Health Management to promote sustainable agriculture. The major programmes are Agro ecosystem Analysis (AESAs) based Plant health Management in conjunction with Ecological Engineering (EE) for Pest Management through Farmer Field Schools (FFS), Production Protocols for bio control agents and microbial bio pesticides to promote bio intensive strategies and reduce the reliance on chemical pesticides. Programmes are also offered in Biosecurity and Incursion Management along with special programmes to build capacity for sanitary and phytosanitary (SPS) compliance. Specialized and mandatory programs are offered in Pesticide Management Division for pesticide analysts, inspectors on Pesticide formulation analysis, inspection and sampling, quality management systems, for scientists and analysts on pesticide residue analysis, and quality management systems. Special programs are also offered in Vertebrate Pest Management and Pesticide Application Technology. NIPHM also organized educational programmes to benefit both fresh graduates and in-service candidates.

In spite of rapid strides made by our country in achieving self-sufficiency in agriculture production, significant yield losses persist due to unscientific agricultural practices. The management of crop losses is increasingly getting complicated due to excessive reliance on agrochemicals, which is impacting food safety and competitiveness of Indian agriculture in gaining market access to the agriculture commodities. In order to mitigate these problems NIPHM has been mandated to build the capacity of Agriculture Extension Officers of Central and State Governments, Scientists of ICAR & SAUs to promote sustainable agriculture.

The capacity building programmes offered by NIPHM equip the master trainers in skills for adoption of Agro ecosystem analysis based Plant Health Management in conjunction with Ecological Engineering for Pest Management, On-farm production of Biocontrol agents & Microbial Bio pesticides, Rodent Pest Management, Biosecurity and Incursion Management, sanitary and phytosanitary (SPS) compliance, Phytosanitary Treatments, Pesticide Residue Analysis for food safety, Pesticide Formulation Analysis for testing the quality of pesticides as per provisions of Insecticide Act, 1968 and quality management systems for accreditation of testing labs as per ISO/IEC 17025:2005.

Besides organizing capacity building programmes to promote bio intensive approaches to minimize usage of chemical pesticides, NIPHM also organizes capacity building programmes in the specialized area of Appropriate Pesticide Application techniques to promote safe and judicious use of chemical pesticides, if and when required. Pesticide Formulation and Residue Analytical Centre (PFRAC) of Pesticide Management Division is ISO/IEC 17025:2005 accredited laboratory of testing of samples for pesticide residues in foods, chemical pesticides in bio-pesticides, pesticide quality analysis, and analyzing > 5000 samples. The laboratory is a gazette notified laboratory for testing bio-pesticides for presence of chemical pesticides, and samples received from insecticide inspectors across India are analyzed. The Proficiency Testing Centre (PTC) of Pesticide Management Division is the first organization in India accredited as PT provider as per ISO/IEC 17043:2010 in the field of pesticide formulation and residue analysis. The division conducts special PT schemes for PTLs across India for evaluation of their testing capabilities. The pool of master trainers created by NIPHM, in turn; train the lower level agriculture functionaries and farmers. However, in respect of certain specialized areas, NIPHM also trains the progressive farmers directly. In addition to the capacity building programmes specifically meant for government functionaries, NIPHM also undertakes capacity building programmes to benefit the agriculture extension functionaries of civil societies, private sector and public sector organizations.

In order to strengthen the capacity building of Agriculture Extension Functionaries in South Asian region and other developing countries, NIPHM organizes International training programmes to promote sustainable agriculture practices, to protect the native agriculture biosecurity and also strengthen sanitary and phytosanitary (SPS) capacity to promote exports and regulate imports.

The capacity building programs in different areas are offered by NIPHM through on campus programmes at Hyderabad as well as off campus programmes in India and foreign countries by the following technical divisions:

- Plant Health Management
- Vertebrate Pest Management
- Plant Health Engineering
- Plant Biosecurity
- Pesticide Management

In the 12th FYP a total of 645 capacity building programmes have been organized wherein, 12,482 participants have been imparted training on the above mentioned aspects.

OTHER NOTABLE / SALIENT ACHIEVEMENTS OF NIPHM

- (A) **Accreditations:** The Pesticide Formulation and Residue Analysis Centre (PFRAC) was awarded ISO/IEC/17025:2005. Proficiency Testing Centre (PTC) of NIPHM achieved accreditation as per ISO/IEC 17043:2010 and is the first Government organization in India to have NABL accreditation as Proficiency Testing provider in the field of pesticide formulation and residue analysis.
- (B) **R&D:** Some of the equipment developed by NIPHM as part of research efforts is as follows:
1. Low Volume Spinning Disk Back Pack Sprayer

2. Rodent Burrow Smoker
3. Hand Shake Duster
4. Swing Sack Granule Applicator
5. Trolley Mounted Solar Assisted Low Volume Sprayer
6. Solar Hybrid Drying System

(C) **Patents (Filed by NIPHM)**

- a. Novel Media for growing fungi and Bacteria with its production technology
- b. Novel Techniques using GS-I and GS-II media for mass multiplication of fungal and bacterial biocontrol agents
- c. Paddy Dryer (2MT)
- d. Natural Enemy Friendly Light Trap

(D) **Special programs focusing on specific issues**

1. Stored Grain Pest Management for OSCSC officials (Off-campus)
2. Brain storming Workshop on Post-Harvest Pests in Peanuts
3. Pesticide Testing Labs (PTLs) Summit.
4. Workshop on Pesticide Formulation Technologies.
5. Workshops for Nurserymen on Phytosanitary issues.

(E) **Projects/Collaboration with Central, State Government Organizations, NGOs:**

1. Collaboration with MANAGE, Hyderabad: Introduction of new course '**Induction programme on Plant Health Management and Agricultural Extension**' for newly recruited Officers in State Department of Agriculture/ and Horticulture was formulated and introduced.
2. Initiation of **District Pest Management Programme (DPMP)** Project in collaboration with MANAGE.
3. Collaboration with Government of Maharashtra under **CROPSAP Project**: Three training programme each of 5 days duration on "On-farm production of Bio control agents and Microbial Bio pesticides to promote AESA based PHM were conducted for the Officials of Maharashtra State Department of Agriculture under CROPSAP Project. Seventy six village level extension officials were given hands on practices on farm production of bio control agents, bio pesticides and bio mycorrhiza.
4. **Indiscriminate usage of Chemicals** in Pesticides in collaboration with seven State Agricultural Universities (SAUs). NIPHM is functioning as nodal agency for the project. The total budget of Rs.6.17 Crores for a period of three year is provided by DAC.
5. Collaboration with **Tobacco Board**, Government of India: NIPHM in collaboration with Tobacco board, Government of India has conducted three days and five days training programmes to tobacco growers of Karnataka State. The farmers participated (55) were given trainings on 'On farm production of bio control agents and Bio pesticides for insect pest management'. In addition to this, training programmes were also conducted for tobacco officers and senior grade officers for five days and three days, respectively. Project with Tobacco Board to provide support through analysis of Coffee Beans for a period of three years.
6. Collaboration with Department of Agriculture, **Government of Meghalaya**: NIPHM in collaboration with Government of Meghalaya, has organized 1 five days training programme entitled Orientation Programme in On-farm production of Bio control agents and Microbial Bio pesticides to promote AESA based PHM conjunction with Ecological Engineering for Pest Management 'under the RKVY project Project with Meghalaya State Agricultural University to conduct training programmes for the Official of the Meghalaya State Agricultural University.

7. Collaboration with Dept. of Agriculture, **Government of Kerala SAMETI**: To conduct off campus POST GRADUATE DIPLOMA IN PLANT HEALTH MANAGEMENT Course for the Officials of the Kerala State Agriculture Management and Extension Training Institute.
8. Collaboration with **KVKs and NGOs**: In order to promote AESA based PHM in conjunction with Ecological Engineering for Pest Management; NIPHM has collaborated with KVKs including those functioning under NGOs. Under this collaboration, NIPHM capacity building programmes were attended by KVK officials and got skills in AESA based PHM in conjunction with Ecological Engineering for Pest Management & On-farm production of Bio control agents and Microbial Bio pesticides. During the year, 2 KVKs working under NGOs, viz. JN Institute of Education, Science & Technology, Nanded (MS) and Shram Sadhna Trust, Amaravati (MS) have entered MoU with NIPHM in addition to 27 KVKs entered MoU earlier. NIPHM also organized off campus farmers training programme in collaboration with KVK Erode (TN) & Sangaria (Rajasthan) and trained 107 farmers on 'On-farm production of BCA, bio pesticides and mycorrhiza.
9. **IARI- MPRNL (Monitoring of Pesticide Residues at National Level) Project**: Project with Indian Agricultural Research Institute to Monitor Pesticide Residues at National level.
10. Collaboration with **Coffee Board**: NIPHM in collaboration with Coffee Board initiated a project on “Fumigation of Coffee Beans with Aluminium Phosphate”, an alternative to MBr. The project was approved by Coffee Board for Rs. 10.21 Lakhs, and is being initiated.
11. Collaboration with **Spices Board**: NIPHM in collaboration with Spices Board initiated a project to popularize the microbial bio-agents for chilli and curry leaf farmers. A meeting was conducted with Goshalas for effective utilization of cow dung.
12. **Alternatives to MBr**: DAC, GOI has entrusted the responsibility to conduct research trails on use of Al Phosphide and Sulfuryl fluoride for treatment of wood and pulses imported into India, and the project is being initiated.

(F) **International projects/Collaboration :-**

NIPHM in collaboration with USDA jointly organized International training programs on Quarantine Pest Detection, Plant Health System Analysis for both International and National Participants.

List of addresses of Central IPM Centres

Sr. No.	Location	Address of the stations
1.	Port Blair	Central Integrated Pest Management Centre Block A, 2 nd Floor, Kendriya Sadan, Lamba Line, Port Blair – 744103
2.	Hyderabad	Central Integrated Pest Management Centre Jeedimetla Village, Jaivik Bhavan, Quhubullapur Mandal, Hyderabad-500055
3	Vijayawada	Central Integrated Pest Management Centre H.No:23-10-17, S.N. Puram Vijayawada , Andhra Pradesh- PIN: 520003
4	Itanagar	Central Integrated Pest Management Centre State Biocontrol Laboratory, Naharlagun, Itanagar, (Arunachal Pradesh) ,
5	Guwahati	Central Integrated Pest Management Centre Opp. Commerce College, R.G. Baraun Road, Guwahati-781003
6	Patna	Central Integrated Pest Management Centre Ramshila Apartment, Aadrsh Colony, Rajbhallbh Dwar, Bailey Road, Saguna More, Patna - -801503, (Bihar)
7	Raipur	Central Integrated Pest Management Centre C-60, Shailendra Nagar, Raipur (CG) -492001
8	Marmugao Harbour	Central Integrated Pest Management Centre Port User's Complex, II Floor, Mormugao Harbor, Goa-403803
9	Vadodara	Central Integrated Pest Management Centre Sarjan Flats, 3 rd Floor, Chankyapuri, New Sama Road, Vadodara-390007
10	Faridabad	Central Integrated Pest Management Centre Machinery Store Building, NH-IV, Faridabad-121001
11	Solan	Central Integrated Pest Management Centre Near Railway Crossing, Chambaghat, Solan-173212(Himachal Pradesh)
12	Jammu	Central Integrated Pest Management Centre 12/48, Nanak Nagar, Jammu-180004
13	Srinagar	Central Integrated Pest Management Centre Tramboo House, Near Day Care School, Rajbagh, Srinagar-190008
14	Ranchi	Central Integrated Pest Management Centre Laxmi Niwas, Krishi Bhawan, KK Road, Ranchi-804008
15	Bangalore	Central Integrated Pest Management Centre Jaivik Bhavan, Kannamangala Post, V ia Kadugodi, Bangalore – 560067
16	Ernakulam	Central Integrated Pest Management Centre Block-A, 1 st Floor, Kendriya Bhawan, Ernakulam, Kochi-682037
17	Indore	Central Integrated Pest Management Centre 16, Professor Colony, Bharwar Kua, Main Road, Indore-452001
18	Nagpur	Central Integrated Pest Management Centre II Floor, New Secretariat Building, East Wing, Civil Lines, Nagpur-440001 . (Maharashtra.)

19	Nashik	Central Integrated Pest Management Centre c/o. Regional Agricultural Extension Management Training institute(RAMETI) , Chambaji Cowk, Unttwadi Road, Nashik - 422 002. (Maharashtra.)
20	Imphal	Central Integrated Pest Management Centre, Mahabali Road Opp. BOAT, Imphal, Manipur
21	Shillong	Central Integrated Pest Management Centre, MMaranatha, Near GSI Workshop Pohkse, P.O. Rynjah, Shillong (Meghalaya) – 793006
22	Aizwal	Central Integrated Pest Management Centre R.L. Zuava's Building Mission, Veng. Republic Road, Aizawal -796001
23	Dimapur	Central Integrated Pest Management Centre 131, Duncan Road, Dimapur, Nagaland -797112
24	Bhubaneswar	Central Integrated Pest Management Centre 195/663, Paika Nagar, P.O. Baramunda Colony, Bhubaneswar -751003
25	Jalandhar	Central Integrated Pest Management Centre Bhavani Estate, Tanda Road, Opp. KMV, Jalandhar City (Punjab.) – 144004
26	Sriganganagar	Central Integrated Pest Management Centre Karni Marg, Sriganganagar – 335001
27	Jaipur	Officer Incharge Central Integrated Pest Management Centre SIAM Parisar, Durgapura, Jaipur (Rajasthan) Pin- 302018
28	Gangtok	Central Integrated Pest Management Centre Tadong Housing Colony, in front of Regional Research Centre (Ayurveda), Tadong, Gangtok -733016
29	Trichy	Central Integrated Pest Management Centre No. 16, 3 rd Street, Khaja Nagar, Trichy -620020
30	Agartala	Central Integrated Pest Management Centre C/o State BC Lab, , Datta Tilla, MatriPally, Badarghat, PO Arundhuti Nagar, Via Siddhi Ashram, Agartala (Tripura-799003)
31	Gorakhpur	Central Integrated Pest Management Centre Khajani Road, Gurouli Bujurg, P.O. Chhapia, Gorakhpur -273016
32.	Lucknow	Central Integrated Pest Management Centre Sec-E, Jankipuram, Ringroad Near Engg. College Crossing, Lucknow , 226016
33.	Agra	Central Integrated Pest Management Centre House No.760, Sector-14, Skandia Avas Vikas Colony, Post Sikandara, Distt. Agra -282007
34.	Dehradun	Central Integrated Pest Management Centre C/o Shri K.S. Phonia, D 9 & 10, Nehru Colony, Dehradun
35.	Kolkata	Central Integrated Pest Management Centre RPQS- Building FB Block Sec-3, Salt lake City Kolkatta -700 097

**list of Plant Quarantine station (57) and their categorization based on the current PQ activities
(Consolidated)**

Category I stations	
1.	Agartala
2.	Guwahati
3.	Lucknow
4.	Okha
5.	Mundra
6.	Raxual
7.	Sanauli
8.	ICD Sanand Ahamadabad
9.	Banbasa
10.	Rupaidiha
11.	Verawal
12.	Pondicherry (Karaikal)
13.	Machalipattnam
14.	Cuddalore
15.	Jogbani
16.	Krishana Pattinam
17.	Karwar
18.	Thiruvananthapuram(Vizhinjam)
19.	Attari- Wagah Border –Rly.Stn.(Working unit under RPQS, Amritsar)
20.	Amritsar Rly. Stn.(Working unit under RPQS, Amritsar)
21.	Air Cargo, Delhi Airport (Working unit under NPQS, New Delhi)
22.	Calicut Airport
23.	Paradeep
24.	Haldia
25.	Pipavav
26.	Coimbatore
27.	Baghdogra Airport
28.	Cochin Airport
29.	Slamabad
30.	Chakandabagh
Category II stations	
31.	Panitanki
32.	Kalimpong
33.	Trivendrum
34.	Triuchirapalli
35.	Jamnagar
36.	Moreh
37.	Gopalganj
38.	Bhavnagar
39.	Air Cargo, Mumbai (Working unit under RPQS, Mumbai.)
40.	Air Cargo, Kolkata (Working unit under RPQS, Kolkata.)
41.	Mangalore
42.	Kakinada
43.	ICD Tuglakabad (Working unit under NPQS, Delhi)
Category III stations	
44.	Visakhapatnam
45.	Tuticorin
46.	Cochin
47.	Bongaon

48.	Hyderabad
49.	Attari- Wagah Border –LCS (Working unit under RPQS, Amritsar.)
50.	Nava Sheva
Category IV stations	
51.	New Delhi
52.	Amritsar
53.	Chennai
54.	Kolkata
55.	Mumbai
56.	Kandla (only consumption Purpose)
57.	Bangalore

List of Participating Laboratories (MPRNL)

1. Project Coordinating Cell, All India Network Project on Pesticide Residues, LBS Building, Indian Agricultural Research Institute, New Delhi
2. Dept. of Entomology, Punjab Agricultural University, Ludhiana, Punjab
3. ICAR Unit No.-9, BTRS Building, Anand Agricultural University, Anand
4. Dept. of Entomology, Mahatma Phule Krishi Vidyapeeth, Rahuri, Maharashtra
5. Dept. of Entomology, College of Agriculture, Kerala Agricultural University, Vellayani, Kerala
6. Division of Soil Sci. & Agril. Chemistry, Indian Institute of Horticulture Research, Hesaraghatta Lake Post, Bangalore, Karnataka
7. Dept. of Entomology, Rajasthan Agricultural University, Research Station, Durgapura, Jaipur
8. Professor Jayashankar Telangana State Agricultural University, E.E.I. Premises, Rajendranagar, Hyderabad, Andhra Pradesh
9. Dept. of Agricultural Entomology, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu
10. Institute of Pesticide Formulation Technology, Sector-20, Udyog Vihar, Gurgaon, Haryana
11. National Institute of Occupational Health, P. B. No. 2031, Meghani Nagar, Ahmedabad, Gujarat
12. Western Region Referral Laboratory, Department of Veterinary Public Health, Bombay Veterinary College, Parel, Mumbai, Maharashtra
13. MPEDA, MPEDA House, Panampilly Avenue, Kochi, Kerala
14. Pesticide Toxicology Laboratory, Indian Institute of Toxicology Research, Mahatma Gandhi Marg, Lucknow, Uttar Pradesh
15. Trace Organic Laboratory, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi
16. National Environmental Engineering Research Institute, Nehru Marg, Nagpur, Maharashtra
17. Regional Plant Quarantine Station, Haji Bunder Road, Sewri, Mumbai, Maharashtra
18. Regional Plant Quarantine Station, G.S.T. Road, Meenambakkam, Chennai, Tamil Nadu
19. AINP on Pesticide Residues, Directorate of Research, Research Complex Building, Kalyani, Nadia, West Bengal
20. Dept. of Entomology, Dr. Y.S.P. Univ. of Horticulture & Forestry, Nauni, Solan, Himachal Pradesh
21. National Plant Quarantine Station, New Delhi
22. National Institute of Plant Health Management (NIPHM), Pesticide Management Division, Rajendranagar, Hyderabad
23. Central Agriculture Research Institute (CARI), Port Blair, Andaman and Nicobar
24. Export Inspection Agency, Kolkatta
25. Export Inspection Agency, Mumbai

A. Salient features of Report on Evaluation Study of On-going Scheme “Strengthening and Modernization of Pest Management Approach in India (SMPMA) conducted by Agro-Economic Research Centre Visva-Bharati, Santiniketan

- The scheme “Strengthening and Modernization of Pest Management Approach in India” has fairly succeeded in achieving its stated objectives.
- In one hand, the number of pesticide registered every year by CIB&RC is increasing very rapidly, on the other hand the facilities for their testing is getting deteriorated with declining manpower availability for quality control.
- The setting up of a National Pesticide Reference Repository (NPRR) and a National Pesticide Investigational Laboratory (NPIL) should be given priority as these are very important to provide pesticide reference standards to pesticide testing laboratories to improve quality of testing and checking spurious pesticides, including bio-pesticides, adulterated with unauthorized chemicals.
- The concerted efforts by the PPQ&S since mid-1980s have resulted in development of political will, bureaucratic commitment, research and development support, awareness and acceptability of IPM by the farmers. There is no denying the fact that in the short run, transition from chemical to bio-pesticides would be less remunerative but the evidences suggest substantial yield saving advantages of IPM over chemical control in the long run (Baral et al., 2006).
- In terms of quantity, the share of Bio-pesticides has been increased from a mere 0.2 per cent in 1994-95 to 12.2 per cent in 2011-12. However, despite its techno-economic superiority over chemical control, adoption of IPM practices remains to hardly 2 per cent of the area treated with pesticides (Birthal, 2004). For reaching the masses, it is now essential to promote lateral spread of IPM through community participation.
- Strict enforcement of regulations of insecticide acts governing pesticide production, use, distribution and quality would help weed out spurious elements from the industry and would benefit the farmers a lot.
- The process of registration, sampling and quality control of insecticide in the country is being done as per The Insecticide Act, 1968 and The Insecticide Rules, 1971 which is going to be replaced by The Pesticide Management Bill, 2008 after its enactment as an act. It is high time to implement the proposed act as early as possible.
- The main concern lies with process and system of registration of pesticides and its quality control. The entire registration process should immediately be made online and the MRL levels should be fixed for all the pesticides.
- Registration requirements for bio-pesticides need to be further simplified to facilitate all bio-pesticide/bio-control agents as Bio-pesticides require entirely a different set of registration norms.
- Five more regional pesticide testing laboratories with modern facilities may be established particularly in eastern, north-eastern, southern, western and central India.
- Effective and sufficient mechanisms need to be developed for quality control and checking the spurious pesticides available in the market.
- The adoption of the IPM technologies disseminated through FFS largely depends on availability of bio-inputs and follow-up training programmes. The FFS approach is considered the most convincing among various agricultural extension methods. The CIPMCs should focus on mass production and distribution of bio-control agents, testing of bio-pesticides, and FFS in co-ordination with state agricultural departments.
- The pest management approach in the country requires a change in its mind set to promote IPM technologies in the country with minimum use of quality and genuine chemicals.

B. Evaluation study of Strengthening and Modernisation of Plant Quarantine Facilities in India

The scheme “**Strengthening and Modernisation of Plant Quarantine Facilities in India**” has been evaluated in the year by Indian Institute of Management, Bangalore during the X Plan in 2006. Action on some of the major recommendations as envisaged in their report needs approval. These are:-

- I. Minor PQ Stations need to be strengthened in terms of equipment, infrastructural facilities, and skilled human resources.
- II. Given the present transfer policies of the Directorate, it is necessary that adequate training is given to the personnel before posting them into divisions requiring different skills and specializations.
- III. A feasible and effective relational database system that automates and streamlines certain vital PQ activities need to be visualized. Such a system could affect computer-generated deployment of existing personnel, standardization of work procedures including sampling techniques, two-way information flow between PQ stations and other collaborative agencies and authorities and eventual clearance/disposal of consignments.
- IV. Work processes of PQ services with DIAs is an urgent need for revitalizing this functional link with formal provisions for financial support to DIAs and a vibrant system of active collaboration between the two.
- V. Development of an Integrated Pest Risk Analysis System conforming to international standards is an important requirement in accordance with the provision of various International Standards for Phytosanitary Measures issued by International Plant Protection Convention (IPPC). In this regard, the proceedings of two International Conferences held in the recent past emphasize the need for establishing and strengthening a separate full-fledged unit for PRA comprising of specialists. This would facilitate easy and effective handling of import and export of plant materials.

Action taken on the recommendations:

1. PQ Stations to service additional entry points being set up as per need. On this way 2 new PQ station at Port Blair and Guntur has been established.
2. ISO Certification for PQ Stations for quality system have granted for 5 Regional & 4 PQ Stations and got ISO Certified.
3. All PQ activities (Import clearance/export certification) have been initiated through Online Plant Quarantine Information System (PQIS).
4. Risk based testing introduced in 168 commodities.
5. Time lines for all PQ activities fixed.
6. Single window system with integration of PQIS and Customs EDI system has been introduced at 44 PQ stations.
7. Establishment of National Agricultural Bio-security System (NABS) on the anvil with new legislation.
8. Revised system for export certification of fresh fruits and vegetables has been implemented.
9. Pest free export ensured with processing and packaging through approved Pack houses.
10. Farmers/ fields registered for procurement of exportable fruits and vegetables.
11. Backward linkage with registered farms has been strengthened.

C. Recommendation made by M/S NABCONS on evaluation of central sector scheme “Monitoring of Pesticide Residues at National Level”

The evaluation of the central sector scheme, “Monitoring of pesticide residues at national level” being implemented by the pesticide residue laboratory, Project Coordinating Cell, All India Network Project

on Pesticide Residues, Indian Agricultural Research Institute, Pusa, New Delhi was conducted by the NABARD Consultancy Services (Nabcons), Mumbai during 2010-11.

The Nabcons suggested the involvement of laboratories under the Ministry of Health Private Laboratories under the MPRNL. They also made suggestions for better coordination under MPRNL such as up-gradation of AINP with respect to independent administration, building space and additional human resource at scientific and technical levels. The committee also made some laboratory specific suggestions such as placement of well qualified and experienced personnel as PI's in the participating laboratories, appointment of Research Officers along with Research Associates (RA) on contract basis for smooth functioning of this mega project at P. C. Cell New Delhi, Training of RA/ SRF's/ Researchers under MPRNL, inclusion of more food commodities and newer molecules, availability of CRM's, AMC's of major equipment, Transport facility for collection of samples, Transport facility for collection of samples etc.

The committee also made policy related suggestions such as sample collection from the un-covered areas of the state by some other agencies such as DMI, Review of technical programme based on the availability of required manpower, obtaining NABL accreditation on priority for laboratories and provide check samples to the laboratories on regular basis to ensure the quality assurance.

The committee also provided minor suggestions such as reanalysis of samples where the residues detected above the MRL values, Result should be confirmed using Mass Spectrometer before reporting, Fortifications and recovery experiment should be carried out on a month-wise basis, Meticulous report including raw data and soft copies for analysis should be stored secure for verification, Codex MRLs should be followed if PFA MRLs are not available, Status of manpower and equipment may also be provided in the periodic report etc.

D. Action taken report on the observations/recommendations made by the NPC on NIPHM

S. No	Observations/Recommendations	Action Taken
1	The Institute could make its presence strongly felt in the area of "Capacity Building" which it considers not only as a "flagship activity" but also "forte" in the field of Plant Health Management (PHM). This perception if not conviction has been shared by various stakeholders including grassroots' level functionaries, administrators, researchers, teachers, trainers and entrepreneurs.	526 training programs organized for 9,846 participants since the year 2012-13. (Including grassroots' level functionaries, administrators, researchers, teachers, trainers and entrepreneurs)
2	Formation of functional divisions and their focus make it clear that NIPHM has done its homework as it is evident that it has been trying to concentrate on new and emerging areas which have a direct bearing on policy, trade, industry, technology and environment and not dealt upon by other agencies so that duplication and overlapping is avoided.	Four Divisions (1) Plant Health Management (2) Plant Bio-Security Division (3) Pesticide Management Division (4) ICT Division and Minor Divisions Vertebrate Pest Management, Bio-Control, Plant Health Engineering are formed for fulfilling Institute to mandate.

3	<p>It is natural to view NIPHM forays into education with skepticism, in the context of several agencies under the auspices of ICAR/SAU are also involved in the same. However an insight into the plans reveal that NIPHM approach and focus is refreshingly different in the sense that it is //more holistic in the form of comprehensive “Plant Health Management (PHM)”. Having said that, the ultimate success of this endeavor would depend on the favorable response from the industry, departments and more importantly the perception of the prospective candidates which might take some more time to emerge and provide a clear picture.</p>	<p>62 Participants were trained in Post Graduate Diploma in Plant Health Management (POST GRADUATE DIPLOMA IN PLANT HEALTH MANAGEMENT) since 2012-13 to 2015-16. 600 participants were trained in Concurrent POST GRADUATE DIPLOMA IN PLANT HEALTH MANAGEMENT (MKV, Parbhani, YSR Uni. T.P.Gudem, TNAU, Coimbatore, ANGRAU, Kerala), 28 participants were trained in Diploma Courses in Bio Security since 2012-13. It is observed that there is increase in training programmes and participants’ year on year since 2012-13.</p>
4	<p>The analogy of education also holds good for research to some extent as the ICAR and SAUs have a long time presence in the area and as such a question arises how NIPHM could differentiate its activities from them. The justification put forward is that the research especially the applied and adaptive in nature would be the focus, which is essential for validation of fundamental type carried out by the other agencies and also to add value to the flagship activity of capacity building. However manpower needs might require reassessment to embark upon large scale research.</p>	<p>Filling up of sanctioned posts including the faculty posts as per Institute’s requirement has been undertaken. As per guidelines Research and Evaluation studies as given below has been taken up.</p> <ol style="list-style-type: none"> i. Development and Validation of Farm level PHM packages/technologies based on AESA and Ecological Engineering approaches for major crops. ii. Development of field level technologies to manage both rodent and other vertebrate pests in different situations. iii. R&D for improving the designs of pesticide appliances, since the design of equipment impacts the health of the pesticides operator and can also play a significant role in environment safety. iv. Evaluation studies of various agricultural programmes. v. Undertake policy oriented research. vi. Participation in developing/reviewing national and international standards on phytosanitary measures, quarantine regulations and agreements. vii. Undertake commodity oriented studies to facilitate Market Access. viii. Undertake studies for establishing pest Free Areas and Areas of Low Pest Prevalence.
5	<p>On the policy front NIPHM has made a beginning by its contribution to the new training policy enunciated for the employees of Directorate of Plant Protection Quarantine &Storage and in Bio-security for strengthening and updating of pest database to address market access issues and review of Plant Quarantine Order. However lot of scope exists for improvement in the policy facilitation front going by the track record so far. Bio-security, Plant quarantine and Climate change are some of the areas where NIPHM is expected to play a major role in providing valuable inputs as India’s presence in international agricultural trade is bound to increase in the near future.</p>	<p>Induction & Refresher training program was organized and Review of IPM Packages and Review of Plant Quarantine Order, 2013 are regularly carrying out and report furnished to DAC & FW for perusal and further action(Policy support)</p>

6	<p>Information & Communication Technology (ICT) which has been maintaining a low profile in the beginning has embarked upon several activities to leverage the advantages of ICT. It has put in motion the development of IT based applications in the areas of procurement, stores, tender process monitoring of expenditure, Pesticide Management, Plant Quarantine and PHM which will go a long way in bridging the gap between the technology developers and users. The institute has also plans to develop few IT enabled services during XII Plan through outsourcing. A robust and state of the art ICT infrastructure is the need of the hour to launch e-learning programs, webinars, podcasts and video conferences and more importantly to develop PHM based IT products for the benefit of PHM practitioners at different levels.</p>	<ol style="list-style-type: none"> 1. Institute has developed a Farmers Desk with an mobile App for the farmers for uploading their problems, for which appropriate solutions are offered online by experts (hosted in Institute's website). 2. Institute has started the e-tendering & e-procurement activities. 3. Online registration of Officers for training programmes is also developed. 4. Wi-fi facilities extended in all divisions and lecture halls/hostels as part of upgradation of training facilities. 5. The Institute is part of National Knowledge Network (NKN) offered by NIC and has also installed state of art video conference facility, which is used to deliver/get online lectures to participants during international collaborative training programmes.
7	<p>Visibility and Public Relations issues are being addressed by initiating several measures including publication of a news letter on plant health and holding national workshops to enhance its visibility among SAUs/ICAR institutes. Annual signature events such as "National PHM Convention" and "Awards for Best Environment Friendly PHM Practices" could keep NIPHM in the limelight and improve its visibility among the stakeholders which might very well result in mutually beneficial professional and business relationship.</p>	<p>Information on training and R&D activities and other related news on Plant Health Management, Plant Bio-security, Pesticide Management, etc., are published in quarterly Newsletters, Annual Reports as well as hosted in NIPHM Website. NIPHM is also participating in various Workshops and Exhibitions for promotion of Sustainable Agriculture.</p>
8	<p>Both internally and externally it has been generally opined that the autonomy has put NIPHM on a higher pedestal giving it the much needed stature both at national and international levels and majority perception is that decision making, management style, funds flow and work culture have changed for better from the NPPTI era..</p>	<p>Decision by DG based on emergency requirements after due consultation from DAC/GC/EC/AC as per requirement has enabled carry out Institute's mandate and vision successfully.</p>
9	<p>As a follow up to the earlier point, liberal budgetary support is essential in the initial phases of the development of the Institute, so that it could firmly establish itself by putting a world class infrastructure in place to carry out its mandate effectively and make a mark in the national/international arena.</p>	<p>Infrastructure– Faculty building cum training block, International Hostel, Bio-control Lab, NIPHM Recreation Club, Bio Fertilizer Lab, State of the art equipment for the laboratories (Bio-security & Plant Health Management, Pesticide Management Labs (PFA, PRA & Bio-pesticides, Proficiency Test Lab) with NABL accreditation) have been provided as upgradation of Institute's facilities.</p>
10	<p>Career progression seems to be a concern at the junior level. This issue appears to have been addressed to some extent with a proposal to create new positions in the near future introduction of other incentives.</p>	<p>Promotional avenues are being created. Proposal for creation of new posts under consideration of Ministry of Finance, Department of Expenditure, New Delhi.</p>
11	<p>NIPHM has carved out a niche in the areas like "Plant Health Management" through AESA & EE based Pest Management, Bio-security and</p>	<p>NIPHM has organized different programmes during the years to build the capacity of agricultural extension officers of central/state</p>

	<p>Incursion Management, Pesticide Management, Vertebrate Pest Management and Pesticide Application Technologies and as there is a need to leverage this advantage and sustain its leadership position by creating a centre of advanced learning in this area to attract master trainers/researchers from under South Asia/Developing Countries. NIPHM has already initiated moves to collaborate with USDA/Bio-if Australia/Foreign Universities which could pay rich dividends if materialized in the near future.</p>	<p>governments, scientists of ICAR Institutions and State Agricultural Universities on various aspects of Plant Health Management to promote sustainable agriculture. The major programmes organized by NIPHM were Agro-Echo System Analysis (AESAs) based Plant Health Management in conjunction with ecological engineering for pest management through Farmer Field Schools (FFS), Production Protocols for Bio-control Agents and Microbial bio-pesticides to promote bio-intensive strategies and reduce the reliance on chemical pesticides. Programmes were also offered in bio-security and incursion management alongwith special programmes to build capacity for SPS compliance. Specialized programmes were also offered in Pesticide Management, Vertebrate Pest Management and Pesticide Application Technology. NIPHM also organized educational programmes to benefit both fresh graduates and in-service candidates. NIPHM has strengthened its infrastructure facilities and re-oriented the training programmes to address the capacity building requirements in South Asia and other developing countries. Capacity building programmes were organized for officers of South Asia in areas relating to Plant Health Management, Bio-security and Pesticide Management and different bilateral and multilateral agreements.</p> <p><u>International Collaboration:</u> To strengthen the capacity in training, research and policy issues in the area of Plant Health Management and Plant Bio-security, NIPHM has entered into collaboration with USAID/USDA. The activities under work plan envisaged organizing joint training programmes at NIPHM through participation of USDA technical experts, faculty exchange programmes, US based training programmes for NIPHM faculties, developing distance learning modules, methods developments and applied research and developing regional Plant Health Systems Analysis.</p>
12	<p>Infrastructure available at present is in not commensurate with the national stature and the future plans of the institute and this view has been shared by the functional divisions during evaluation. However, during the last two years the institute has focused on strengthening the infrastructure and most of these will be operational by the end of the current year. The institute has received substantial grants from the DAC during 2011-12 and 2012-13 to put in place the required infrastructure. The new faculty</p>	<p>Infrastructure– Faculty building cum training block, International Hostel, Bio-control Lab, NIPHM Recreation Club, Bio Fertilizer Lab, State of the art equipment for the laboratories (Bio-security & Plant Health Management, Pesticide Management Labs (PFA, PRA & Bio-pesticides, Proficiency Test Lab) with NABL accreditation) have been provided as up gradation of Institute’s facilities.</p>

	<p>building cum training block is nearing completion and the construction of new hostel building is in progress. Modern and sophisticated equipment are being procured for different divisions and it is expected that many of them will be operational by the end of this year. The institute has also identified the other required infrastructure and sought grants during XII Plan. In addition to creating new infrastructure efforts are also on to renovate the existing hostel and quarters to improve the quality of services offered to the participants and staff respectively.</p>	
13	<p>Scope exists for improvement in Milestone mapping and tracking against strategic/action plans of the divisions/institute. While the present centralized planning and monitoring is understandable as the institute is yet to take firm roots, a well-documented MIS and e-monitoring of the same at divisional level could be introduced in a phased manner.</p>	<p>NIPHM is still in the process of fully achieving its vision. The training programmes and R&D programmes are regularly being monitored at Divisional level through Divisional meetings and progresses of each Division are being documented through Annual Reports of the Institute as well as its Newsletters.</p>
14	<p>Creating and maintaining an electronic inventory/database of capacity building activities is the need of the hour to facilitate easy retrieval of information. While participant databases at individual divisions are already in place feedback related information need to be organized in a more systematic manner.</p>	<p>e-database maintained by ICT Division.</p>

Expenditure Finance Committee (EFC) (2017-18 to 2019-20)
Year-wise financial outlay for “Integrated Pest Management (IPM)”
for next three years

(Rs. in lakhs)

S. No.	Head	Sub-Head	2017-18	2018-19	2019-20
A. Recurring					
1	70201	Salaries	3575.03	4788.50	7049.00
2	70202	Wages	15.67	27.00	55.00
3	70206	Medical Treatment	118.16	167.00	270.00
4	70211	Domestic Travel Expenses	245.65	364.00	464.00
5	70212	Foreign Travel Expenses	10.00	12.00	16.50
6	70213	Office Expenses	588.12	742.00	950.00
7	70214	RR&T	442.41	576.00	681.50
8	70216	Publication	3.72	5.00	11.50
9	70220	Other Adm. Expenses (Training SLTP, FFS, 5 days and 2 days by CIPMCs/KVKs/ SAUs)	1084.10	1234.40	1439.00
10	70221	Supply & Material	17.13	22.00	28.75
11	70226	Advertisement & Publicity	136.00	136.00	136.00
12	70227	Minor Works	150.00	189.00	237.50
13	70228	Professional Services	1.00	2.50	5.12
14	70230	Contractual Services/ Outsourcing	10.00	10.50	12.50
15	70231	GIA (IPM Seva Kendra)	27.00	34.00	42.50
Total: A			6423.99	8309.90	11398.90
B. Non-Recurring					
16	4401	Capital-Major work	400.00	600.00	800.00
17	200151	Motor vehicle	270.00	65.00	90.00
18	200152	Machinery & Equipment	738.00	200.00	330.00
19	2552 01.00.31	North Eastern Areas Grant-in-Aid General	250.00	250.00	250.00
20	3601 070131	Grant-in-aid to State Government	0	260.00	0
Total: B			1658.00	1375.00	1470.00
Grand Total: A+B			8081.99	9684.90	12868.98

Details of New CIPMCs proposed to be established during 2017-18 to 2019-20

S. No.	Name of the State	Name of Station
1	2	3
01	Andhra Pradesh	Kurnool
02	Assam	Johrat
03	Bihar	Motihari
04	Gujarat	Junagarh
05		Patan
06	Haryana	Jind
07	Kerala	Kasargod
08	Karnataka	Dharwad
09	Maharashtra	Solapur
10	Madhya Pradesh	Jabalpur
11.	Odisha	Rayagada
12.	Rajasthan	Udaipur
13.	Tamil Nadu	Thiruvellur
14	Uttar Pradesh	Banda/ Jhansi
15.	West Bengal	Murshidabad

Annexure III-B

A. The following equipments/ items are required for Modernization and Strengthening of bio-control in existing 35 CIPMCs.

S. No.	Equipment	Number of unit	Estimated cost per unit	Approximate cost (in Rs.)
1	Heat convector	54	2500	135,000
2	Semi Automatic <i>Corcyra</i> Rearing System	112	40000	4,480,000
3	Hygrometer	71	8000	5,68,000
4	Thermometer	85	2000	170,000
5	Mixture-cum-grinder	66	12000	792,000
6	<i>Corcyra</i> egg laying cages	186	3000	558,000
7	UV Chamber with UV tube light	32	15000	480,000
8	Vacuum cleaner	42	20000	840,000
9	Quartz Double Distillation Water Unit	24	225000	5,400,000
10	Hot Air Oven	34	70000	2,380,000
11	BOD Incubator	35	150000	5,250,000
12	Horizontal Laminar Flow work station	26	120000	3,120,000
13	Autoclave Vertical	29	100000	2900000
14	Multi Media Projector	22	100000	2,200,000
15	Stereo Trinocular Phase Contrast Microscope	35	500000	17,500,000
16	Centrifuge Refrigerated High speed 2000rpm	31	145000	12400000
17	Haemocytometer with thick cover slip	25	50000	1,250,000
18	Camera SLR	32	45000	1,440,000
19	Shaker along with incubator	35	200000	7,000,000
20.	Refrigerator (Double Door)	42	50,000	21,00,000
21.	Electronic balance (capacity 50gm)	35	50,000	17,50,000
22.	Tablets	75	20,000	15,00,000
			Total	7,42,13,000

B. The following equipments/ items are required for Modernization and Strengthening of bio-control units in proposed 15 new CIPMCs.

S. No.	Equipment	Number of unit	Estimated cost per unit	Approximate cost (in Rs.)
1	Heat convector	20	2500	50,000
2	Semi Automatic Corcyra Rearing System	30	40000	12,00,000
3	Hygrometer	10	8000	80,000
4	Thermometer	20	2000	40,000
5	Mixture-cum-grinder	10	12000	1,20,000
6	<i>Corcyra</i> egg laying cages	40	3000	1,20,000
7	UV Chamber with UV tube light	20	15000	3,00,000
8	Vacuum cleaner	10	20000	2,00,000
9	Quartz Double Distillation Water Unit	10	225000	22,50,000
10	Hot Air Oven	10	70000	7,00,000
11	BOD Incubator	20	150000	30,00,000
12	Horizontal Laminar Flow work station	10	120000	12,00,000
13	Autoclave Vertical	10	100000	10,00,000
14	Multi Media Projector	10	100000	10,00,000
15	Stereo Trinocular Phase Contrast Microscope	10	500000	50,00,000
16	Centrifuge Refrigerated High speed 2000rpm	10	145000	14,50,000
17	Haemocytometer with thick cover slip	10	50000	5,00,000
18	Camera SLR	10	45000	4,50,000
19	Shaker along with incubator	10	200000	20,00,000
20.	Refrigerator (Double Door)	10	40000	4,00,000
21.	Electronic balance (capacity 50gm)	10	34000	3,40,000
22.	Tablets	30	20,000	6,00,000
			Total	2,20,00,000

Annexure III-C

Expenditure on One Farmers Field School IPM demonstration-cum-training for 30 farmers and 5 Apprentice Officers (AEOs/NGOs/Lead farmers etc. for one FFS of duration of 14 days)

S. No.	Description of items/activities	Proposed cost norm for 2017-2020	As per proposal Cost (Rs.)
1.	Refreshment	@Rs.30/- per trainee for 14 number of program + 5 nos. apprentice officer (35x30x14)	14,700
2.	Contingent expenditure of POL/hiring of vehicles		5,000
3.	Contingent expenditure, Banners & refreshment for inaugural function of FFS		3,600
4.	1. Cost of training material including IPM kit ** 2. Cost of pheromones/bio-pesticides, emergency spray, other relevant training materials including planting of at least 100 Neem trees.	@Rs.1,200/- (1200x35)	42,000 3,000
5.	Distribution of IPM literature and agricultural implements for cultural/mechanical practices for 30 trainees	@Rs.2,00/- (35x200)	7,000
6.	Farmers' Field Day (one day) Miscellaneous contingent expenditure including refreshment	Rs. 1,600 + Rs. 1,400 (35x40)	3,000/-
7.	Honorarium for two facilitators/trainers	Rs.2,800/- each for complete season	5,600/-
8	Videography / photography	2,000	2,000
8.	Grand Total Rs.		85,900/-
9	Total expenditure for conducting one FFS by State Govts./SAUs/KVKs.		90,800/-
10	Total expenditure for one FFS by NGOs / Private bodies.		94,800/-

N.B. *Contingent expenditure on POL / hiring of vehicles will be Rs. 4,000/- per FFS for Government and Public sector Organisation viz. State Government / KVKs /SAUs /ICAR Institutes and Rs. 7,000/- for NGOs and private bodies.

** The details of the proposed IPM Kits along with their details are at Annexure III-C (i)

Annexure III-C (i)

**List of IPM Kit items with Specifications, the Existing rates & the proposed rates
(The same IPM Kit will be used in FFSs, 2 and 5 days IPM orientation Programme and SLTPs)**

S.no.	Item	Specification	Quantity	Current Rate	Proposed Rate (in Rs.)
1.	Insect Sweep Net	Steel ring 5 mm thickness 37.5 Cm diameter with 37.5 cm flap & 60 cm long conical bag made of markin cloth and a sturdy 1m long handle of 2,5cm diameter. Ring cover flap made of jean cloth.	1	Each kit was having cost of Rs. 150/-	200
2.	Hand Lens (10X)	Steel Framed Box (Folded)	1		75
3.	Brush	Camel Hair No.3	1		20
4.	Watch Glass	7.5 cm diameter	1		20
5.	Plastic vials	7.5x2.5 cm with lid	5		40
6.	Dissecting needle	With plastic handle	1		10
7.	Poly bags	30x20 cm	10		10
8.	Rubber bands	-	20		10
9.	Note Book	20x13 cm; 40 pages	1		25
10.	Ball pen	15 cm with cap	1		20
11.	Cello Tape	1.5cm x 9 m	1		20
12.	Drawing / Sketch Pen	Blue& Red	2		30
13.	IPM cap	Front Cover 7.5 cm length, 16.5 cm diameter 17.5 cm elastic trap & tight & loose system with National IPM emblem embossing.	1		50
14.	IPM kit bag	Made of jean cloth 35x30 cm having 5 cm depth with 90 cm shoulder string. National IPM emblem embossing	1		150
15.	Drawing sheet	Full size (75 x 55 cm)	2		20
16.	Gum boot		1 pair	200	
17.	Apron		1	110	
18.	Hand gloves		1 pair	100	
19.	Goggle		1	100	

IPM ORIENTATION TRAINING (2 days) BUDGET DETAILS UNDER IPM COMPONENT

1.Catering Expenses	Proposed cost norm for 2017-2020	Amount (Rs.)
(i) Trainees (40)+ Officer (5)+ supporting staff (13)	@ Rs.500 per day for 53 trainees for 2 days (500 x 53 x 2)	53,000
2. Training accessories		
(i) Training and awareness literature	@ Rs.100 for 40 persons (100 x 40)	4,000
3. POL & Minor repairs/ hiring charges of vehicles	@ Rs.1000 per day for 2 days (1000 x 2)	2,000
4. Other expenses		
(i) Stationery	@ Rs.500/- per day	1,000
(ii) Inaugural Function		
Banners		1,000
Seating arrangement		1,500
Tea for 100 persons	@Rs 20/- per head (100x20)	2,000
(iii) Valedictory function		
Seating arrangement		1,500
Tea for 60 persons	@ 20/- per head (100x20)	2,000
(iv) Contingency		1,000
5. Videography / Photography	2,000	2,000
Total		71,000/-

Annexure III-E

IPM ORIENTATION TRAINING (One Week - 5 days) BUDGET DETAILS FOR ACCOMODATION, CATERING, P.O.L. ETC. UNDER IPM COMPONENT

Description of items/activities	Proposed cost norm for 2017-2020	Amount (Rs.)
1.Accommodation		
- Participants (40 trainees) on twin sharing basis	@ Rs.1,000 per day for 40 trainees for 5 days (1,000 x 20 x 5)	1,00,000
- Resource Person (4 persons)	@ Rs.1,500 per day for 4 Resource Persons for 5 days(1,500 x 4 x 5)	30,000
2.Catering expenses for 44 persons		
(i) Trainees & trainers etc.	@ Rs.5,00 per day for 53 trainees for 5 days(500 x 53 x 5)	1,32,500
3. Training accessories		
(i) Training equipment including IPM Kit	@ Rs.1,200 per IPM Kit for 40 persons (1200 x 40)	48,000
4. POL & Minor repairs/hiring charges of vehicles	@ Rs.1,000 per day for 5 days (1000 x 5)	5,000
5. Other expenses		
(i) Stationery	@Rs.5,00/- per day	2,500
(ii) Inaugural Function		
Banners		1,000
Seating arrangement		1,500
Tea for 100 persons	@ Rs.20/- per head	2,000
(iii) Valedictory function		
Seating arrangement		1,500
Tea for 60 persons	@ Rs 20/- per head	1,600
(iv) Contingency		3,000
6. Videography / photography	2,000	2,000
Total Rs.		3,30,600

**Pattern of Expenditure for Season Long Training Programme- for 30 days
(Training of Facilitators/Master Trainers)**

S. No.	Description of items/activities	Proposed cost norm for 2017-2020	Amount (Rs.)
1.	Accommodation:		
	Training Hall (for 30 days)	@Rs. 3000/- day	90,000
	- Participants (40 trainees) on twin sharing basis	@Rs.1000/-day (1000x20x30)	6,00,000
	- Support staff (5persons) on twin sharing basis	@Rs.1000/-day (1000x2.5x30)	75,000
	-Resource persons (08) on single accommodation	@ Rs. 1500/-day (1500x8x30)	3,60,000
	Total cost (accommodation):		11,25,000
2.	Catering expenses for 53 persons	@Rs.500/- day(53x500x30)	7,95,,000
3.	Training Expenses:		
	(a) IPM Training Kit & fields materials (40 trainees)	@Rs. 2000/- trainee(2000x40)	80,000
	(b) Book/Stationery/Dissertation (40 trainees)	@Rs.750/- trainee(750x40)	30,000
	Total cost (Training expenses):		1,10,000
4.	POL & Minor repair/Vehicle Hiring charges:	@Rs.1500/- day(1500x30)	45,000
5.	Other expenses :		
	Stationery		25,000
	Training materials		15,000
	Total cost (Other expenses):		40,000
6.	Inaugural function :		
	Banners		1,500
	Seating arrangement		1,500
	Tea & snacks (for 100 persons)	@Rs.30/- x 100 persons. @Rs.175/- x 50 persons.	3,000
	Working lunch (for 50 persons)		8,750
	Total Cost (Inaugural function)		14,750
7.	Valedictory function :		
	Banners		1,500
	Seating arrangement		1,500
	Tea & snacks (for 100 persons)	@Rs.30/- x 100 persons. @Rs.175/- x 50 persons.	3,000
	Working lunch (for 50 persons)		8,750
	Total cost (Valedictory function) :		14,750
8.	Honorarium		
	Resource person (08)	@Rs.1000/-dayx10x30 @Rs.1500/-dayx10x5	2,40,000
	Guest Resource person (5 for 10 days in 30 days course)		75,000
	Total cost (Honorarium)		3,15,000
9.	Contingency:		15,000
10.	Traveling Allowance (For trainees of North Eastern Region)		15,000
11	Videography	25,000	25,000
	GRAND TOTAL :		25,14,500

IPM Seva Kendra**Concept:**

The concept of these Centers is for production and making available of IPM inputs like bio-control agents, light traps, rodent traps, Pheromone traps, Sticky traps, Nuclear Polyhedrosis Virus (NPV), bird perture, seed treatment drum, Neem seed Kernal extract (NSKE), cattle dung, ash etc. to the farmers of their vicinity and development of entrepreneurship of the farmers & promoting rural employment.

Mandate:

The mandate of these Centers is to produce and to ensure availability of IPM inputs like bio-control agents, light traps, rodent traps, Pheromone traps, Sticky traps, Nuclear Polyhedrosis Virus (NPV), bird perture, seed treatment drum, Neem seed Kernal extract, cattle dung, ash etc. to the farmers of their vicinity and development of entrepreneurship of the farmers & promoting rural employment.

Objectives:

- Production and making available of IPM inputs like bio-control agents, light traps, rodent traps, Pheromone traps, Sticky traps, Nuclear Polyhedrosis Virus (NPV), bird perture, seed treatment drum, Neem Seed Kernal extract (NSKE), cattle dung, ash etc.
- Development of entrepreneurship of the farmers & promoting rural employment.

Activities:**IPM Seva Kendra-**

- Production of IPM inputs like bio-control agents, light traps, rodent traps, Pheromone traps, Sticky traps, Nuclear Polyhedrosis Virus (NPV), bird perture, seed treatment drum, Neem Seed Kernal extract (NSKE), cattle dung, ash etc. and making a them available to the farmers of their vicinity.
- Developing entrepreneurship of the farmers & promoting rural employment.

List of equipment for IPM Seva Kendra

Sr. No.	Particulars	No. of unit	Estimated cost
01	Seed Treatment Drum	01	5000/-
02	Pressure Cooker (7 lit.)	01	3000/-
03	Mixer cum Grinder	01	5000/-
04	Microscope	01	20000/-
05	Plastic tubs	10	2000/-
06	Glassware / poly bags		5000/-
07	Hand lens / miscellaneous		5000/-

Staff requirement for proposed new CIPMCs

S. No	Name of the State	Name of Station	Staff strength										Total	Remarks
			AD (E/PP/WS)	PPO (E/PP/WS)	APPO (E/PP/WS)	SA	TA	UD C	LDC	Driver	MT S			
1	2	3	4	5	6	7	8	9	10	11	12	14	15	
01	Andhra Pradesh	Kurnool	1	0	3	2	1	1	1	1	3	13		
02	Assam	Johrat	0	1	3	2	1	1	1	1	3	13		
03	Bihar	Motihari	1	0	3	2	1	1	1	1	3	13		
04	Gujarat	Junagarh	0	1	3	2	1	1	1	1	3	13		
05		Patan	1	0	3	2	1	1	1	1	3	13		
06	Haryana	Jind	0	1	3	2	1	1	1	1	3	13		
07	Kerala	Kasargod	1	0	3	2	1	1	1	1	3	13		
08	Karnataka	Dharwad	0	1	3	2	1	1	1	1	3	13		
09	Maharashtra	Solapur	1	0	3	2	1	1	1	1	3	13		
10	Madhya Pradesh	Jabalpur	0	1	3	2	1	1	1	1	3	13		
11.	Odisha	Rayagada	1	0	3	2	1	1	1	1	3	13		
12.	Rajashtan	Udaipur	0	1	3	2	1	1	1	1	3	13		
13.	Tamil Nadu	Thiruvellur	1	0	3	2	1	1	1	1	3	13		
14	Uttar Pradesh	Banda/ Jhansi	0	1	3	2	1	1	1	1	3	13		
15.	West Bengal	Murshidabad	1	0	3	2	1	1	1	1	3	13		
Total			08	07	45	30	15	15	15	15	45	195		

Annexure III-I

Funding pattern:

For setting up new State Bio Control Lab (SBCL):

- a) Rs. 80.00 lakh for building
- b) Rs. 48.81 lakh for equipments as listed below
- c) **For strengthening of SBCL** funds up to Rs. 48.81 lakh can be provided for equipments only excluding vehicle.

List of equipments for SBCL

S. No.	Equipment	Number of unit	Estimated cost per unit	Approximate cost (in Rs.)
1	Heat convector	20	2500	50000
2	Steel Racks (7x3x19) (with 6 compartments)	20	3000	60000
3	Chysopa cages	20	2500	50000
4	Laboratory tables	5	15000	75000
5	Laboratory stools	20	500	10000
6	Hygrometer	10	1000	10000
7	Thermometer	10	1000	10000
8	Mixture-cum-grinder	2	8000	16000
9	Corcyra egg laying cages	50	2000	100000
10	UV Chamber with UV tube light	2	15000	30000
11	Exhaust Fan	10	3000	30000
12	Vacuum cleaner	2	10000	20000
13	Water Distillation Unit	1	50000	50000
14	Glasswares (Petri dishes, Jars, Flask etc.)	-	-	100000
15	Air Conditioner with cooling and heating arrangement with 4 KVK Stabilizer	8	50000	400000
16	Refrigerator (Double Door) 300 liter	2	40000	80000
17	Hot Air Oven	2	50000	100000
18	BOD Incubator with temp. humidity and photo period provision with 1 KVA stabilizer	2	125000	250000
19	Centrifuge (High speed)	2	25000	50000
20.	Laminar Flow	1	50000	50000
21.	Autoclave Vertical	1	50000	50000
22.	Semi automatic Corcyra rearing system	50	25000	1250000
23.	Microscope (Research with accessories)	1	150000	150000
24.	Stereo Biinocular Microscope	1	100000	100000
25	Digital electronic balance	1	60000	60000
26.	Vehicle with diesel jeep with trailer	1	1000000	1000000
27.	Haemocytometer with thick cover slip	1	20000	20000
28.	Camera SLR	1	60000	60000
29.	Shaker along with incubator	1	150000	150000
30.	Misc. lab items.			500000
			Total	48,81,000

Action Plan (2017-18 to 2019-20):**Outlay for the component locust control & Research for next three years**
(Rupees in Lakh)

Head	Sub -Head	2017-18	2018-19	2019-20
		A		
	Recurring			
010201	Salary	1672.00	1839.00	2166.00
010203	Wages	3.20	3.40	3.60
010206	Medical Treatment	25.00	27.00	29.00
010211	Domestic Travel Expenses	45.00	50.00	55.00
010212	Foreign Travel Expenses	10.00	15.00	15.00
010213	Office Expenses	70.00	77.00	85.00
010214	RRT	5.00	0.00	0.00
010216	Publication	1.00	1.10	1.20
010220	Other Adm. Expenses	1.00	1.00	1.00
010221	Supplies & Material	8.00	10.00	12.00
010227	Minor Works	50.00	50.00	50.00
010228	Professional Services	0.00	0.00	0.00
Total (A)		1890.20	2073.50	2417.80
B				
010251	Motor Vehicle	150.00	160.00	160.00
010252	Machinery & Equipment	10.00	10.00	12.00
010230	Contractual services	8.00	11.00	11.00
	Capital	50.00	0.00	0.00
Total (B)		218.00	181.00	183.00
Grant Total (A+B)		2108.20	2254.50	2600.80

Annexure IV -A

Statement of the off road/condemned vehicles at LWO/LCO's/FSIL

Sl. no	Name of the vehicles & Reg.No.	Model(Year)	Covered in Kms	Condition of the Vehicle	Present Status condemnation/auction,etc.
1.	RSN-1742,1746& 1794-Diesel Jeep(3 Nos.)	1979	228776 143137 163701	U/S	DAC approval awaited bearing F.No.3411/5/2016-OMRAC dt. 04.11.2016
2.	RJ-07 GA 5611(FC)	1985	48157	U/S	
3.	Toyota Hi-lux	1990	194038	U/S	Off Road due to old model and unavailability of spare parts. GFR 17 report in under process.
4.	Mahindra Diesel Jeep	1979	67855	U/S	Off Road. GFR 17 report in under process.
5	RSN 1813 MAHENDRA DIESEL	1979	1,22,819	Off road	Not repairable due to absolute model and required parts are not available in market. No parts are manufactured
6	Diesel Jeep M&M Rj-14-IC-5874	1983	205010	Auctioned	Auctioned on 6-9-2016
7	Diesel Jeep TMH 5782	1979	198460	Off- Road	Under Repair
8	Diesel Jeep RSN 1815	1979	139254	Off- Road	Loss survey report are under process
9	Diesel Jeep RSN 1792	1972	165789	Off- Road	Sanction are awaited for condemnation
10	Petrol Jeep RSQ 2861	1972	151789	Off- Road	Loss survey report are under process
11	Petrol Jeep RSQ 2861	1972	98434	Off- Road	do-
12	Petrol Jeep RSQ 2841	1972	123623	Off- Road	Sanction are awaitedfor condemnation
13	Petrol Jeep RSO 2698	1972	102430	Off Road	Under auction
14	Petrol Jeep RSQ 2568	1972	64802	Off Road	Under auction
15	Jeep, RSN-1743	1979	155342	Accidental	Jeep, RSN-1743

16	Jeep, RSN-1744	1979	155133	Off Road	Jeep, RSN-1744
17	Gypsy HR 29 D 9695	1994	98198	Off Road	
18	Gypsy HR 29 E	1994	143513	Off Road	
19	Mini Truck RJ 10 GA 2596	1985	46927	Off Road	Awaited Auction
20	Diesel Jeep RSN-1751	1979	284744	Off Road	Repairable
21	Mini truck RJ -19 GA-9879	1985	36759	Off Road	Repairable

Annexure V

Budget outlays for CIB&RC during 2017-18 to 2019-20 (Rs. In Lakh)**(A) Recurring Expenditure**

Budget Head	2017-18	2018-19	2019-20
Salary	405.50	891.75	2210.15
Wages	2.00	2.20	2.42
OTA	2.00	2.20	2.42
Medical Treatment	5.00	5.50	11.00
Domestic Travel Expenses	26.00	28.60	56.60
Foreign Travel Expenses	4.00	4.40	10.00
Office Expenses	20.00	22.00	60.00
RRT	0	0	0
Publication	1.00	1.10	1.21
Other Administrative Expenses	1.50	1.65	1.82
Supply & Material	0	0	0
Advertisement and publicity	5.00	5.50	6.05
Minor Works	15.00	20.00	25.00
Professional Services	2.50	2.75	3.03
Contractual Services	25.00	27.50	30.25
Total	514.50	1015.15	2419.94

(B) Non-Recurring Expenditure

Budget Head	2017-18	2018-19	2019-20
Machinery & Equipment	50.00	60.00	75.00
Motor Vehicle	0	25.00	15.00
Major Works	200.00	1200.00	1800.00
Total	250.00	1285.00	1890.00

Annexure V-A

Financial implications for strengthening of ongoing activities of CIB&RC:

Name of the Post	Pay scale	No. of Post required	Total Financial Implication (Rs. in Lakh) per annum
Joint Director (Tox)	Pay Band-III 15600-39100 with Grade pay of 7600/.	2	34.56
Joint Director (WS/Packaging)- one each	Pay Band-III 15600-39100 with Grade pay of 7600/.	2	34.56
Deputy Director(Chem/E/PP/Tox)- one each	Pay Band-III 15600-39100 with Grade pay of 6600/.	4	60.00
Assistant Director (Chem/PP/WS/E)-one each	Pay Band-III 15600-39100 with Grade pay of 5400/.	4	51.84
Assistant Director (Tox)	Pay Band-III 15600-39100 with Grade pay of 5400/.	3	38,88
Plant Protection Officer (Chem/E/PP/WS)- one each	Pay Band-II 9300-34800 with Grade pay of 4600/.	4	40.40
Plant Protection Officer (Tox)	Pay Band-II 9300-34800 with Grade pay of 4600/.	4	40.40
APPO (Chem/E/PP/WS)- Two each	Pay Band-II 9300-34800 with Grade pay of 4200/.	8	62.40
APPO (Tox)	Pay Band-II 9300-34800 with Grade pay of 4200/.	4	31.20
Steno Grade-D	Pay Band-I with Grade pay of 2400/.	1	5.75
LDC	Pay Band-I with Grade pay of 1900/.	1	5.10
MTS	Pay Band-I with Grade pay of 1800/.	1	4.80
Total		38	371.01

Annexure V-B

Financial implications for newly proposed activities:

a. International Cooperation Cell:

Name of the Post	Pay scale	No. of Post required	Total Financial Implication (Rs. in Lakh) per annum
Joint Director (PP)	Pay Band-III 15600-39100 with Grade pay of 7600/.	1	17.28
Deputy Director(Chem/E/Tox)- one each	Pay Band-III 15600-39100 with Grade pay of 6600/.	3	45.00
Assistant Director (Legal/PP)-one each	Pay Band-III 15600-39100 with Grade pay of 5400/.	2	25.92
Plant Protection Officer (Chem/E/Tox)- one each	Pay Band-II 9300-34800 with Grade pay of 4600/.	3	30.30
APPO (Chem/E/PP/Tox)- one each	Pay Band-II 9300-34800 with Grade pay of 4200/.	4	31.20
Steno Grade-D	Pay Band-I with Grade pay of 2400/.	1	5.75
LDC	Pay Band-I with Grade pay of 1900/.	1	5.10
MTS	Pay Band-I with Grade pay of 1800/.	1	4.80
Total		16	165.35

b. National pesticides e-portal (with linkage to stake holders):

Name of the Post	Pay scale	No. of Post required	Total Financial Implication (Rs. in Lakh) per annum
Joint Director (Chem)	Pay Band-III 15600-39100 with Grade pay of 7600/.	1	17.28
System Analyst	Pay Band-III 15600-39100 with Grade pay of 6600/.	1	15.00
Senior Programmer	Pay Band-III 15600-39100 with Grade pay of 5400/.	1	12.96
Assistant Director (Chem/PP/E/Tox)- one each	Pay Band-III 15600-39100 with Grade pay of 5400/.	4	51.84
Plant Protection Officer(WS)	Pay Band-II 9300-34800 with Grade pay of 4600/.	1	10.10
Data Processing Assistant	Pay Band-II 9300-34800 with Grade pay of 4600/.	1	10.10
APPO(Chem/E/WS/P P/Tox)- one each	Pay Band-II 9300-34800 with Grade pay of 4200/.	5	39.00
Steno Grade-D	Pay Band-I with Grade pay of 2400/.	1	5.75
LDC	Pay Band-I with Grade pay of 1900/.	1	5.10
MTS	Pay Band-I with Grade pay of 1800/.	1	4.80
Total		17	171.93

c. Environment Impact Study Cell:

Name of the Post	Pay scale	No. of Post required	Total Financial Implication (Rs. in Lakh) per annum
Joint Director (Tox)	Pay Band-III 15600-39100 with Grade pay of 7600/.	1	17.28
Deputy Director(Chem/PP/WS/E)- one each	Pay Band-III 15600-39100 with Grade pay of 6600/.	4	60.00
Assistant Director(Tox)	Pay Band-III 15600-39100 with Grade pay of 5400/.	1	12.96
PPO (Chem/E/PP/WS)- one each	Pay Band-II 9300-34800 with Grade pay of 4600/.	4	40.40
APPO (Chem/PP/E/WS/Tox)	Pay Band-II 9300-34800 with Grade pay of 4200/.	5	39.00
Steno Grade-D	Pay Band-I with Grade pay of 2400/.	1	5.75
LDC	Pay Band-I with Grade pay of 1800/.	1	5.10
MTS	Pay Band-I with Grade pay of 1800/.	1	4.80
Total		18	185.29

d. Registration Compliance Assurance cell (with linkage to stake holders):

Name of the Post	Pay scale	No. of Post required	Total Financial Implication (Rs. in Lakh) per annum
Joint Director (WS)	Pay Band-III 15600-39100 with Grade pay of 7600/.	1	17.28
Deputy Director (Chem/E/PP/Tox)- one each	Pay Band-III 15600-39100 with Grade pay of 6600/.	4	60.00
Assistant Director(WS)	Pay Band-III 15600-39100 with Grade pay of 5400/.	1	12.96
Plant Protection Officer (Chem/E/Tox/PP)-one each	Pay Band-II 9300-34800 with Grade pay of 4600/.	4	40.40
APPO (PP/E/WS/Tox/Chem)- one each	Pay Band-II 9300-34800 with Grade pay of 4200/.	5	39.00
Steno Grade-D	Pay Band-I with Grade pay of 2400/.	1	5.75
LDC	Pay Band-I with Grade pay of 1900/.	1	5.10
MTS	Pay Band-I with Grade pay of 1800/.	1	4.80
Total		18	185.29

e. Biocide Registration Cell:

Name of the Post	Pay scale	No. of Post required	Total Financial Implication (Rs. in Lakh) per annum
Joint Director (E)	Pay Band-III 15600-39100 with Grade pay of 7600/.	1	17.28
Deputy Director(PP/Chem)-one each	Pay Band-III 15600-39100 with Grade pay of 6600/.	2	30.00
Assistant Director(E/Tox)	Pay Band-III 15600-39100 with Grade pay of 5400/.	2	25.92
Plant Protection Officer (PP/Chem/Tox)-one each	Pay Band-II 9300-34800 with Grade pay of 4600/.	3	30.30
APPO(Chem/Tox/P P/E)	Pay Band-II 9300-34800 with Grade pay of 4200/.	4	31.20
Steno Grade-D	Pay Band-I with Grade pay of 2400/.	1	5.75
LDC	Pay Band-I with Grade pay of 1900/.	1	5.10
MTS	Pay Band-I with Grade pay of 1800/.	1	4.80
Total		15	150.35
Sub Total (a+b+c+d+e)		84	858.21

Annexure VI

**Budget outlay for the component Central Insecticide laboratory for next three years
(2017-18 to 2019-20)**

S. No.	Sub Head	2017-18 (Rs. In lakh)	2018-19 (Rs. In lakh)	2019-20 (Rs. In lakh)
1	Salaries	200	230	250
2	Wages	2	2	3
3	O.T.A.	0	0	0
4	Medical Treatment	9	9	10
5	Travel Expenses	20	22	25
6	Foreign Expenses	0	0	0
7	Office Expenses	45	50	55
8	RRT	0	0	0
9	Publication	0	0	0
10	Other Adm. Expenses	0	0	0
11	Supply & Material	30	32	35
12	Minor Works	30	30	25
13	Professional Services	0	0	0
Recurring		336	375	403
13	Machinery Equipments	700	150	150
14	Motor Vehicle	0	0	0
15	Contractual Services	0	0	0
16	Capital	0	0	0
17	Grant-in-Aid	0	0	0
Non-recurring		700	150	150
Grand Total		1036	525	553

Annexure VI – A

A. Requirement of Equipments in Chemistry Division:

Sr. No.	Name of Equipments	Quantity	Cost per equipment (Rs. in Lakhs)	Approximate cost (Rs. in Lakhs)
1	Gas- liquid Chromatograph	3	15.00	45.0
2	High Performance Liquid Chromatograph (HPLC)	3	25.00	75.0
3	FT-IR	1	10.00	10.00
4	Analytical Balance	2	3.00	6.0
5	PH Meter	2	0.20	0.40
6	Deep-Freezer	1	1.0	1.0
7	Miscellaneous Equipment	-		10.00
8	GC-MS-MS	1	100.00	100
9	LC-MS-MS	1	200.00	200
	Total			447.4

B. Requirement of Equipments in Bioassay Division:

Sr. No.	Name of Equipments	Quantity	Approximate cost (in lakhs)
1	Phase contrast microscope	1	15.0
2	Digital colony counter	1	1.0
3	Hot Air Oven	1	0.8
4	Deep Freezer	1	1.5
5	Haemocyto meter	1	0.2
6	Steriobinocular microscope with camera	1	2.0
7	ELISA reader complete Set	1	0.8
8	Vortex	1	0.4
9	Laminar Flow	1	1.5
10	BOD Incubator	1	1.5
11	Electronic Balance	1	3.0
	Total		27.70

C. Requirement of Equipments in Packaging and Processing Division:

Sr. No.	Name of Equipments	Quantity	Approximate cost (Rs. in lakhs)
1	Gas- liquid Chromatograph	1	15.00
2	High Performance Liquid Chromatograph (HPLC)	1	25.00
3	UV-visible spectrometer	1	10.00
4	Analytical Balance	1	2.00
5	PH Meter	1	0.20
6	Deep-Freezer	1	1.00
7	Drop Tester	1	3.50
8	Tensile Testing Machine	1	4.50
9	Bursting Strength Tester	1	2.50
10	Cob Tester	1	1.50
11	Tearing Strength Tester	1	2.00
12	Puncture Tester	1	2.50
13	Vacuum Leak tester	1	1.00
14	Hot Air Oven	1	1.50
15	Vibration Tester	1	4.00
16	Miscellaneous Equipment	-	5.00
	Total		81.2

D.Requirement of Equipments in MT Division:

Sr. No.	Name of Equipments	Quantity	Approximate cost in lakhs
1	Biochemical semi Auto analyzer	1	1.0
2	TDS Meter	1	0.10
3	Carbon dioxide chamber	1	1.0
4	shoe dispenser	1	0.30
5	Electrical Incinerator	1	1.0
6	Autoclave	1	2.0
7	Deep freezer	1	1.0
8	ELISA Reader	1	0.80
9	Automatic cage washer	1	7.0
	Total		14.20

Annexure VI – B**A. Implementation of Central Pesticide Analysis Information System (CPAIS) in CIL and 2 RPTLS**

S.NO	Budget Component	Laboratory Name	Estimated cost (in lakhs)
1.	LAN Back bone and Networking	CIL & 2 RPTLS	40 .0
2.	Software Development for CPAIS	CIL & 2 RPTLS	50.0
3.	Hardware Components (Computers printers etc)	CIL & 2 RPTLS	15.0
4.	Recurring Cost for CPAIS for maintenance of software and hardware.	CIL & 2 RPTLS	5 .0
	Total	-	110

B.CIL as Proficiency Testing (PT) Provider

S.NO	Budget Component	Laboratory Name	Estimated cost (in lakhs)
1.	Infrastructure Development for PT provider	CIL	20.0
2.	Instruments	CIL	20.0
3.	Training etc	CIL	5.0
	Total	-	45.0

Annexure VI – C

Division wise staff strength and post required of CIL:

Name of Post	Bioassay	Chemistry		Medical Toxicology		Packaging	
	Existing	Existing	Required	Existing	Required	Existing	Required
Joint Director	1	1	-	1		1	-
Dy. Director	4	2	-	3		-	1
Asst. Director	2	5	-	-	3	-	1
PPO	4	-	8	-	4	-	2
APPO	9	16	-	10	5	4	2
SA 1	2	-	-	-	-	-	
PA	2	-	1	-	1	1	1
Lab Technician	3	2	1	2	-	-	-
L.D.C.	1	-	1	2	-	-	-
Lab Attendant	5	-	5	10	-	-	-
M.T.S	4	5	-	-	1	2	-
Mechanic	-	-	-	-	-	1	-
Instrument tech.	-	1	-	-	-	-	-
Total	37	32	16	28	14	9	7

Justification of Requirement of Manpower for CIL:

A. Chemistry Division:

1. Plant Protection Officer (Chemistry): The officers will operate sophisticated instruments like GC-MS-MS, LC-MS-MS, GLC, HPLC, FTIR and UV Visible spectrophotometer and I and II coding of referred samples. Method validation for newly registered molecules of pesticides.

2. Lab Attendants: To assist analytical group heads (Asst. Directors) and coding officers.

B. Medical Toxicology Division:

1. Assistant Director (Veterinary Pathologist): As per GCR and OECD guidelines for the acute/sub-acute studies, all the experimental evaluations/studies on animals require to be supported with pathological investigations. The Pathologist shall be responsible for planning, organizing, supervising and interpreting the results. Looking to the vastness of the tests, it is proposed to have automation in evaluation and results of which are required to be interpreted by the Pathologist. Therefore, it is proposed that one post of Pathologist (veterinary doctor) may be created for achieving the above mentioned target.

2. Asst. Director (Biochemistry): All the experimental evaluations as well as epidemiological studies require to be supported with biochemical investigations. For concluding the toxicity of a pesticide, the Biochemist has to undertake biochemical investigations and to give his/her opinion. He/She shall be responsible for planning, organizing, supervising, evaluating and interpreting of the results. Looking to the vastness of the tests done in animals related to biochemistry (it is proposed to have automation in evaluation and results of which require to be interpreted by the Biochemist. Therefore, it is proposed that at least one post of Biochemist with specialization in Medical Biochemistry may be created for achieving the above mentioned target

3. Assistant Director (Toxicology)/Pharmacology: At present there is no post of Assistant Director(Toxicology)/Pharmacology sanctioned for MT Division. All the animal experimentation/toxicological studies, its evaluation as well as epidemiological studies require to be supported by a pharmacologist/toxicologist. For conducting the toxicity study of a pesticide, the pharmacologist /toxicologist has to undertake the experimental work with animals and to co-ordinate and assist the Deputy Director (Pharmacology) in planning, organizing, supervising

and evaluating the experiments/toxicity studies. Looking to the vastness of the total toxicological studies on 19 parameters required to be undertaken, it is proposed that one posts of Assistant Director Pharmacology with specialization in Toxicology/animal experimentation may be created in achieving the above mentioned target.

4.Plant Protection Officer (Toxicology): This Division has to conduct sub-acute/sub chronic and chronic toxicological studies for safe evaluation of pesticides. The sub-acute/sub chronic toxicity studies involve Histopathological, Haematological and Biochemical investigations. Such toxicological studies require specialized/trained man power. They would be assisting and co-ordinating the experimental studies with the Assistant Directors of the respective fields. The creation of these post would also provide some promotional avenues to the long stagnated lower cadres of APPO (Tox.) and also enable the uniformity in organizational structuring. Hence it is proposed that three posts of PPO with the specialization in above mentioned subjects may be created

5. Plant Protection Officer (Animal house): The breeding animal house requires the attention of trained and experienced personnel for raising the healthy animal colony free from disease/microbiologically specific pathogens and maintaining animal house's hygienic condition. The responsibilities assigned to this post include supervision of animal house, functioning, care and management of experimental animals. The need to conduct regular microbiological screening of lab animals and keep/maintain the animals/colony as per the GLP standards. They should meet the rules and guidelines given by CPCSEA in paramount. Also the animal colony should be identified with individual identification numbers and records need to be maintained. It is therefore proposed to create PPO (Animal house) The creation of these posts would also provide some promotional avenues to the long stagnated lower cadres of APPO (Animal House)

6. Assistant Plant Protection Officer(Toxicology): This Division has to conduct sub-acute/sub chronic and chronic toxicological studies like mutagenicity etc. for safe evaluation of pesticides as per Insecticides Act, 1968. The sub-acute/sub chronic toxicity studies involve Histopathological, Haematological and Biochemical investigations. APPO (Tox.) are required to conduct/assist the senior officers viz. Pathologist, Biochemist and PPO(Tox) in executing the planned experiments. Also, as a supportive staff to strengthen the infrastructure of experimentation, in investigating and conducting the experimental procedures. It is therefore proposed to create 2 post of APPO may be created keeping in view the enhanced target wrt sample received from state director of agriculture.

7. Asst Plant Protection Officer (Animal House): The breeding of animals in the animal house requires the attention of trained and experienced personnel for raising the healthy animal colony free from disease/microbiologically specific pathogens and maintaining animal house's hygienic condition. The responsibilities assigned to this post include supervision of animal house, functioning, care and management of experimental animals. The need to conduct regular microbiological screening of lab animals and keep/maintain the animals/colony as per the GLP standards (AH) to maintained animals breeding and records

C. Packaging & Processing Division:

1.Deputy Director (Packaging): Deputy Director will assist Joint Director and Supervise A.D., PPO and Assistant Plant Protection Officers. They will also look overall supervision of work related to sample distribution, report finalization. He/She shall be responsible for planning, organizing, supervising, evaluating and interpreting of the results.

2. Asst Director (Packaging): Assistant Director, will assist Deputy Director, Joint Director and Supervise PPO and Assistant Plant Protection Officers and also analyze some of the pesticide samples for Shelf life studies and samples for packaging, labeling, and leaflets under section 5(c). They will also look overall maintenance of the modern sophisticate analytical equipments such as Gas Liquid Chromatograph, High Pressure Liquid Chromatograph, Ultra Violet Spectrophotometer, Four Transformed Infra-Red Spectrophotometer, pH meter and other packaging instruments like tensile tester, thickness gauge etc.

3.Plant Protection Officer (PPO Packaging): The PPOs will assist Assistant Director, Deputy Director, Joint Director and Supervise Assistant Plant Protection Officers and also analyze some of the pesticide for Shelf life studies and samples for packaging, labeling, and leaflets under section 5(c). They will also calibrate the modern sophisticate analytical equipment such as Gas Liquid Chromatograph, High Pressure Liquid Chromatograph, Ultra Violet Spectrophotometer, Four Transformed Infra-Red Spectrophotometer, pH meter as per NABL requirement.

4.Assistant Plant Protection Officer (APPO Packaging): The APPOs will assist Assistant Director, Deputy Director, Joint Director and analyze some of the pesticide samples for Shelf life studies and samples for packaging, labeling, and leaflets under section 5(c) . They will also calibrate the modern sophisticate analytical equipments such as Gas Liquid Chromatograph, High Pressure Liquid Chromatograph, Ultra Violet Spectrophotometer, Four Transformed Infrared Spectrophotometer, pH meter and packaging instruments like tensile tester, thickness gauge etc.

Year-wise break up of outlay for the subcomponent “Techno-Legal Cell (TLC)” including RPTLs and Bio-Pesticides Testing Laboratories at CIPMCs during next three Year Plan (2017-20)

S. No.	Sub Head	Year wise planning (Rs. In lakhs)		
		2017-18	2018-19	2019-20
A	Recurring			
1	Salaries	1350.19	1486.41	1584.25
2.	Wages	3.00	3.50	7.00
3.	OTA	0.00	0.00	0.00
4.	Medical Treatment	45.0	47.0	74.00
5.	Domestic Travel Expenses (DTE)	35.0	40.0	60.0
6.	Foreign Travel Expenses (FTE)	0.00	0.00	0.00
7.	Office Expenses	100.0	110.0	150.0
8.	RRT	0.00	0.00	0.00
9.	Publication	0.00	0.00	0.00
10	Other Administrative services	15.0	20.0	25.0
11	Supply & material	45.00	51.0	97.00
12	Advertisement & publicity	0.00	0.00	0.00
13	Minor Work	0.00	0.00	0.00
14	Professional services	0.00	0.00	0.00
15	Additional Posts	0.00	0.00	0.00
	Total A	1593.19	1757.91	1997.25
B	Non-Recurring			
1.	Machinery & Equipment	516.80	600.00	780.00
2.	Motor Vehicle	0.00	15.0	15.00
3.	Contractual services	10.0	17.0	26.0
4.	Grants-in-aid	650.00	2280.00	3543.00
5.	Capital	0.00	0.00	0.00
	Total B	1176.8	2912	4364
	Grant Total (A +B)	2769.99	4669.91	6361.25

**Grant-in-Aid to States for Establishment/Strengthening of State Pesticide testing
Laboratory (SPTL)**

1. Rs 80 lakh for construction of SPTL
2. Rs. 82 Lakh for equipments of SPTL. Details of Equipments are as follows:

Equipment to be supplied to SPTLs for quality control of pesticides

S. No.	Name of Equipment	Cost (Rs. in lakh)
3	HPLC	30.00
4	GLC	25.00
5	FTIR	15.00
6.	UV Visible Spectrophotometer	10.00
7.	Electronic Balance	2.00
	Total	82.00

Annexure VII-B

Grant-in-Aid to States for Establishment of Bio Pesticide testing Laboratory at SPTL

S. No.	Equipment	No.	Cost (Rs. In Lakh)
1.	ELISA (Enzyme-linked immune sorbent assay) complete unit	1	11.00
2.	Fluorescent Microscope with phase contrast attachment	1	12.00
3.	Miscellaneous equipment	1	2.00
	TOTAL	--	25.00

Annexure VII-C

Equipment to be provided to SPTLS for residual analysis/ detection of lacing of chemical pesticides in Bio-pesticides/Bio-products and investigational purpose

Rs. 80 lakh for construction of Pesticide Residue laboratory

S. No.	Name of Equipment	Cost (Rs. in lakh)
1	LC-MS/MS	150.00
2	GC-MS/MS	100.00
3	Miscellaneous	25.00
	Total	275.00

Annexure VII-D

Equipment for existing Regional Pesticides Testing Laboratories at Chandigarh and Kanpur

S. No.	Name of Equipment	RPTL, Chandigarh	RPTL, Kanpur	Cost (Rs. in lakh)
1.	LC-MS/MS	1	1	300.00
2.	GC-MS/MS	1	1	200.00
3.	GLC	1	1	50.00
4.	HPLC	1	1	60.00
5.	UV-VIS Spectrometer	1	1	20.00
6.	FTIR	1	1	30.00
7.	Electronic Balance	1	1	4.00
8.	Miscellaneous items	-	-	50.00
	Total			714.00

Equipment required for 01 Newly proposed Regional Pesticide Testing Laboratories at Indore and 01 newly proposed accredited RPTL at Bangalore

S. No.	Name of Equipment	No of Instruments required	Cost (Rs. in lakh)
1.	LC-MS/MS	2	300.00
2.	GC-MS/MS	2	200.00
3.	GLC	2	50.00
4.	HPLC	2	60.00
5.	UV-VIS Spectrometer	2	20.00
6.	FTIR	2	30.00
7.	Electronic Balance	2	4.00
8.	Miscellaneous items	-	50.00
	Total		714.00

Equipment required for Bio-pesticide testing for RPTLs and CIPMCs

S. No.	Equipment	No.	Approximate Cost (Rs. In Lakh)
1.	Laminar flow	1	01.20
2.	BOD Incubator	1	01.20
3.	Hot Air Oven	1	00.25
4.	Autoclave	1	00.50
5.	Moisture Analyzer	1	00.70
6.	Haemocytometer	1	00.40
7.	Aerosol Disinfectant	1	00.25
8.	ELISA (Enzyme-linked immune sorbent assay) complete unit	1	10.00
9.	PCR (Polymerase Chain Reaction) Complete Unit	1	12.00
10.	Compound Microscope (Research)	1	02.50
11.	Fluorescent Microscope with phase contrast attachment	1	10.00
12.	Centrifuge (20,000 rpm)	1	01.20
13.	Micropipette (different range) 0.01 µml-1ml	--	01.20
14.	Miscellaneous items	--	02.00
15.	Portable digital pH meter	-	0.70
	TOTAL	--	44.10

Considering 06 new Bio-pesticides Testing lab in 06 CIPMCs and 02 Existing RPTLs in next 03 years, the amount of funds calculates to Rs.352.80 (44.10 x 8) Lakh

Equipment for Pest Diagnosis laboratory**A. List of Equipment for Agricultural Entomology division**

S. No.	Equipment required	Quantity required	Cost/unit	Total price (Rs.)	Purpose
1	Compound binocular microscope	3	200000	600000	This is needed for quick identification of small insects up to their species level.
2	Steriobinocular microscope fitted with Image grabber	1	620,000	620000	To carry out close work such as dissection and identification. And also to take an image of the Insect.
3.	Smartphone or computer with internet facility	1	30000	30000	To access UC Berkeley Biokeys and class website
4.	Refrigerator	2	40000	80000	For short time storing of samples etc.
5	Insect storage cabinets/mounting boards	10	40000	400000	To store insect sample for future reference

B. List of Equipment for Plant Pathology division

S. No.	List of Equipment	Cost / Unit (Rs.)	Purpose
1.	Aerosol disinfectant	5000/-	Required to maintain 100% sterile germ free environment in the laboratory. It will also use for the de - contamination of laboratory.
2.	Digital colony counter	9000/-	For counting of colony forming units of bio-pesticides samples more accurately.
3.	ELISA reader complete Set	1,84000/-	Required for detection of Endo-toxin in <i>Bt</i> samples
4.	Haemocytometer	28000/-	Required for counting Poly Occlusion Bodies (POBs) for NPV Samples
5.	High Speed refrigerated centrifuge (20,000 rpm)	1,50,000/-	Required for separating particles from a solution according to their size, shape, density, viscosity of the medium and rotor speed.

6.	Moisture Analyser	95000/-	To measures the per cent Moisture content in Bio-pesticides samples/ formulations
7.	Portable Digital pH meter	30,000/-	To measure the pH of the Bio-pesticide sample
8.	Shaker with incubator	150000/-	To make homogeneous samples
9.	Microwave Oven	25000/-	Required for melting of Culture media
10.	Laminar Flow	157,500	Working Atmosphere Under aseptic condition
11.	Autoclave	46576/-	Sterilization of Culture Media and decontamination of microbial culture
12.	Biological Oxygen Demand (BOD) Incubator	130000/-	Incubation of Microbial cultures Plants at Specific Temperature and moisture.
13.	Hot Air oven	21366/-	Sterilization of Glass Wares and drying of glassware
14.	Deep Freezer	30000/-	Storage of mother Cultures and some Chemicals at Low temperature
15.	Refrigerator	23,000/-	Storage of reference cultures as a depository
16.	Distillation Unit for Distilled water	23000/-	Distilled water is required for preparation of all reagents and culture media
17.	Phase contrast Microscope	184000/-	To Examine the microbial spores and their morphological identifications.
18.	Binocular microscope	620,000/-	To Examine the egg/ larvae of insect pests and their morphological identifications
19.	Micropipette	15000/-	To measures all liquid chemicals/ reagents accurately.
20.	Thermometer/Temperature Probes	23,000/-	To measures the room temperature.
21.	UV fluorescent lamp	35000/-	To view the DNA bands in gel
	Total	1914072	

C. List of Equipment and general requirement for Phytonematology Division

S.No.	Instrument	Cost/Unit (Rs.)	Purpose
1.	Nematode Extraction Unit	180,000/-	Identification of nematodes
2.	Fenwick can	11,500/-	“
3.	Baerman funnel	-----	“
4.	Sieve set	-----	“
5.	Steriobinocular microscope	620,000/-	“
6.	Compound Binocular Microscope	1,90, 000/-	“
	Total	1001500	

D. List of Equipment and general requirement for Weed Science Division

S.No.	Instrument	Cost/Unit (Rs.)	Purpose
1.	Weed Seeds storage cabinets (50Boxes)	10, 000/-	Identification of weed seeds of various species and its proper storages
2.	Digital Camera	20, 000/-	To capture the photograph of weed seed for record
3.	Sterio-binocular microscope fitted with Image grabber	620,000	Microscopic examination of seed
4.	Magnifiers	1000/-	For observation of minute weed seed
	Total	651000	

Annexure VII-G

A. Staff Requirement for 01 Newly proposed Regional Pesticide Testing Laboratories at Nashik, and 01 newly proposed GLP accredited RPTL at Hyderabad

S.No.	Post /Designation	Strength required per RPTL	Financial Implication For required strength/year for one Laboratory (Rs. in Lakh)	Total Financial Implication For required strength/year for two laboratories (Rs. in Lakh)
1.	Joint Director (Chem.)	1	17.36	34.72
2.	Dy. Director (Chem.)	1	15.04	30.08
3.	Assistant Director (PP)	1	12.96	25.92
4.	Assistant Director (Chem.)	1	12.96	25.92
5.	Plant Protection Officer (Chem.)	2	20.24	40.48
6.	Plant Protection Officer (PP)	1	10.12	20.24
7.	Administrative Officer	1	10.12	20.24
8.	Assistant Plant Protection Officer (Chemistry)	8	62.72	125.44
9.	Assistant Plant Protection Officer (PP)	3	23.52	47.04
10.	UDC	1	5.76	11.52
11.	Data Entry Operator	1	5.76	11.52
12.	LDC	1	4.64	9.28
13.	Driver	1	4.64	9.28
14.	MTS	4	18.56	37.12
	TOTAL	27	224.40	448.80

The total Budget for 2 Proposed RPTLs for three years shall be (448.80+493.68+543.04) Rs 1485.52 lakh. An increment of 10% is factored in for calculating budget.

Functional justification of posts required in 02 newly proposed RPTLs at Indore and Bangalore and during next 03 years of EFC

1. Joint Director (Chemistry)- 02 No.

Joint Directors (Chem.) will be Officer Incharge for controlling the activities and function of the Regional Pesticides Testing Laboratories (RPTLs) which includes analysis of chemical and Bio-pesticides for their quality parameters as per the relevant specifications and detection of residues of chemical pesticides in different matrices like, Bio-pesticide/Bio-products. Development of test method of newly registered molecules and maintaining accreditation and enhancing the scope related to the testing of pesticides. He will also act as Head of laboratory for various administrative and technical matters.

2. Deputy Director (Chemistry)- 02 No.

Deputy Directors (Chem.) will assist JD(Chem.) and head in receiving, distribution and getting tested the samples by different analytical group heads constituted by JD (Chem.) comprising AD and PPOs. He will also act as Technical manager and will be responsible for maintaining NABL accreditation of the laboratory. They will also be assigned the work of scrutinising the analytical data , preparation of action plan related to generation of data related to NABL and responding to other statutory bodies.

3. Asstt. Director (Chemistry)- 02 No.

Assistant Directors (Chem.) are essentially required in RPTLs to assist Deputy Director Chemistry / Joint Director Chemistry) in disposing off the work related to laboratory which includes testing of samples by analysts for physico-chemical parameters of pesticides and detection of chemical pesticides in Biopesticide/Bio-products. They will also guide analyst for method validation in case of sophisticated equipment. He will also maintain training records of analyst who will be deputed for training related to pesticide formulation analysis , pesticide residue and NABL accreditation.

4. Asstt. Director (Plant Pathology)- 02 No.

Assistant Directors (PP) are essentially required in RPTLs for disposing off the work related to laboratory which includes testing of Bio-pesticides samples for their quality. They will also guide analyst for handling and testing of samples by sophisticated equipment. He will also maintain training records of analyst who will be deputed for training related to Bio-pesticide testing and NABL accreditation.

5. Plant Protection Officer (Chemistry)- 04 No.

PPO (Chem.) will act as group head and will be responsible for testing of samples by analysts for physico-chemical parameters of pesticides and detection of chemical pesticides in Biopesticide/Bio-products. They will also guide analyst for method validation in case of sophisticated equipment. They will verify and check the analysis reports related to testing of chemical pesticides with respect to specification used by analyst, chromatograph generated by the instrument, date of analysis to dispose the testing of pesticides within specified time limit.

6. Plant Protection Officer (PP)- 02 No.

PPO (PP.) will be responsible for getting samples of Bio-pesticides tested by analysts for quality parameters. They will also guide analyst for method validation in case of sophisticated equipment. They will verify and check the analysis reports related to testing of Bio-pesticides with respect to specification used by analyst, date of analysis to dispose the testing of pesticides within specified time limit.

7. Administrative Officer- 02 No.

They will act as Drawing and disbursing officer of the establishment and maintain service record, purchasing of various laboratories items such as equipment, chemicals, glassware's and stationeries etc. They will assist officer incharge of laboratory in different matters arising out of communication received from directorate, pesticide industries and local state authorities.

8. Assistant Plant Protection Officers (Chem.) -16 No.

APPOs are required to meet the requirements of manpower for analysis of samples for enhanced targets and for reporting of results in stipulated time. Following functions will be performed by them They will analyse and report test results to the Insecticide Inspectors or other authorities from whom samples are received within the stipulated time. They will handle and maintain the sophisticated laboratory equipments available in the laboratory and maintain their records regarding repairs/ AMCs etc. They will maintain the laboratory records in e form and also in hard copies and attend the other laboratory work assigned by the laboratory in-charge.

9. Assistant Plant Protection Officer (PP) 06 Posts

Assistant Plant Protection Officer (PP) are required for undertaking analysis of bio-pesticides and reporting thereof within stipulated time. Analysis of the samples of Bio-pesticides received from CIIs and insecticides inspectors of states /Uts for Ist analysis, reporting of test results to the Insecticide Inspectors or other authorities within the stipulated time, handling and maintaining the sophisticated laboratory equipments available in the laboratory and their records regarding repairs/ AMCs etc They will also maintain the laboratory records in e-form and also in hard copies and attend the other laboratory work assigned by the laboratory in-charge.

10. Upper Division Clerk- 02 No.

They will assist administrative officers in disposing of administrative work related to service matters of employees, purchase , maintenance of laboratory infrastructure and other assigned work by officer incharge.

10. Data Entry Operator-02 No..

They will assist Officer incharge and other technical officers of the laboratories in uploading the data related to testing of samples, court cases, RTI and preparation of testing reports.

10. Lower Division Clerk- 02 No.

They will assist administrative officers in disposing of administrative work related to service matters of employees, purchase , maintenance of laboratory infrastructure and other assigned work by officer incharge.

B. Staff Requirement for Newly proposed 06 Bio- Pesticide Testing Laboratories at Faridabad, Nagpur, Guwahati, Kolkata, Lucknow and Bangalore

S. No.	Post / Designation (Pay scale)	Additional post required per CIPMCs	Financial Implication for BPTL (Rs.In lakh)/year	Financial Implication for 6 BPTLs (Rs. In Lakh)/year
1.	Plant Protection Officer (PP)	1	10.00	60.00
2.	Assistant Plant Protection Officer (PP)	1	8.00	48.00
3.	Scientific Assistant	1	6.00	36.00
4.	Multi Tasking Staff	2	4.50	27.00
	TOTAL	5	28.50	171.00

Total budget for 3 years shall be.(171.0+188.1+206.91) Rs 566.01 Lakhs. An increment of 10% is factored in for calculating budget.

Functional justification of posts required in existing 06 Bio-pesticide Testing Laboratories in CIPMC stations at Faridabad, Nagpur, Guwahati, Kolkata, Lucknow and Bangalore during next 03 years of EFC

1. Plant Protection Officer (PP)- 06 No.

PPO (PP.) will be responsible for getting samples of Bio-pesticides tested by analysts for quality parameters. They will also guide analyst for method validation in case of sophisticated equipment. They will verify and check the analysis reports related to testing of Bio-pesticides with respect to specification used by analyst, date of analysis to dispose the testing of pesticides within specified time limit.

2. Assistant Plant Protection Officer (PP) 06 Posts

Assistant Plant Protection Officer (PP) are required for undertaking analysis of bio-pesticides and reporting thereof within stipulated time. Analysis of the samples of Bio-pesticides received from CIIs and insecticides inspectors of states /Uts for Ist analysis, reporting of test results to the Insecticide Inspectors or other authorities within the stipulated time, handling and maintaining the sophisticated laboratory equipments available in the laboratory and their records regarding repairs/ AMCs etc They will also maintain the laboratory records in e-form and also in hard copies and attend the other laboratory work assigned by the laboratory in-charge.

3. Scientific Assistant 06 No.

Scientific Assistant will assist to the Plant Protection Officer and Assistant Plant Protection Officer in conducting of analysis of bio-pesticides maintaining the records and laboratory scientific data and preparing the official documents required from time to time.

4. Multi Tasking Staff (MTS)-12 No.

They will assist the officers of TLC in disposing of the work related to diary despatch, communication received and issued, transfer of files and letters to other units of directorate, photocopying of documents.

C. Staff required in TLC, for task force and at sea ports/airports

S No.	Designation	No. of posts	Financial implication (in lakh)/year	
Staff required for TLC, task force for disposing off the complaints force and for checking illegal import.				
		Sanctioned post	Additional post required	
1.	Joint Director (Chem.)	01	01	34.72
2.	Deputy Director (Chem.)	01	01	22.60
3.	Assistant Director (Chem.)	00	03	38.88
4.	Plant Protection Officer (Chem.)	01	03	32.89
5.	Asstt. Plant Protection Officer (Chem.)	01	06	39.39
6.	Law Officer	01	02	38.52
7.	Legal Asstt.	01	04	47.04
8.	MTS	01	04	20.88
	Total	07	24	274.79

The total Budget of the TLC for three years shall be (Rs 274.79+302.26+332.48) 909.53 Lakh An increment of 10% is factored in for calculating budget.

Functional justification of posts proposed in TLC during next 03 years of EFC

Officers of this Directorate are notified as Insecticide Inspectors by the Central Govt. to reinforce the implementation of the provisions of The Act. alongwith authorities of the State Govt. Further, most of the officers of Dte. of PPQ&S remain occupied with their routine work related to PQ, IPM and CIB & RC etc. and hence unable to spare their sufficient time for performing duties as Insecticide Inspector. Therefore, an exclusive task force comprising officers of the Directorate, which will exclusively work for checking illegal import, manufacturing and trading/distribution of pesticides in the country is proposed. Moreover, the workload has also been increased due to the increase in the number of complaints, received in TLC and documents received from Customs in case of illegal import of pesticides for taking necessary action due to shortage of technical staff in TLC. In addition, no posts of officers especially from Chemistry discipline have been created for posting at ports of entry for checking illegal import of pesticides. A total budget of Rs. 1179.0 Lakh is proposed for creation of exclusive task force comprising Asstt. Director, Plant Protection Officers and APPOs of Chemistry discipline for implementing the provisions of The Insecticides act, 1968 and for providing grant-in-aid to the states and UTs.

1. Joint Director (Chemistry)- 01 No.

Joint Director (Chem.) will be over all responsible for controlling the task force unit in the matter of planning, implementation of programme of conducting raids / inspection, providing guidance to Inspectors for launching prosecution and conducting raids himself, draw samples, in case of complaints of sub-standard / spurious pesticides or offences of serious nature on instructions from DAC / Directorate. JD will be supported by other officers like , Deputy Director, Assistant Directors, Plant Protection Officers and Assistant plant Protection Officers etc. It has been observed that the officers are so occupied with their routine work that they can not be spared immediately as and when required for raids / inspections which also includes visits out of station. To tackle aforesaid problem a special task force consisting of Joint Director, Deputy Directors, Assistant Directors, PPOs needs to be formed and will be exclusively assigned the work of conducting raids/ inspection which will not hamper the routine working of the Directorate.

2. Deputy Director (Chemistry)- 02 No.

Deputy Director (Chem.) will be responsible for planning and implementation of programme of conducting raids / inspection, providing guidance to Inspectors for launching prosecution He will also act as team leader during investigation of the complaints related to illegal import, manufacturing and selling of spurious pesticides. DD will be

supported by other officers like , Assistant Directors, Plant Protection Officers and Assistant plant Protection Officers etc.

3. Assistant Director (Chem.) - 03 Post

Six posts of Assistant Director (Chem.) are essentially required in Techno-Legal Cell to assist Deputy Director Chemistry / Joint Director Chemistry) in disposing off the work related to TLC which includes controlling of the task force unit, in the matter of planning, implementation of programme of conducting raids / inspection, maintaining records of such raids/inspections, sending reports of task force to DAC, analysis of reports of task force, providing guidance to Inspectors for launching prosecution, co-ordination between DAC and SPTLs, Directorate and RPTLs for technical and miscellaneous administrative matters, grant-in-aid to states, framing replies for parliamentary questions and VIP references etc.. Four of the out of six Assistant Directors 02 AD will be posted in TLC at Faridabad for co-ordinating the work related to task force and routine matters of TLC and 04 will be posted at Regional Plant Quarantine Stations at Mumbai, Kolkata and Chennai to investigate the matter related to illegal import and checking the quality of pesticides imported in the country.

4. Plant Protection Officer (Chem.) - 04 Posts

Out of 12 Posts of PPO (Chem.), 09 will be posted in TLC and will be deputed for conducting raids , inspection and verification of the complaints received from various sources and will also be deputed for surprise inspection in the market and manufacturing premises for checking the quality of pesticides. Remaining 03 PPOs will be deputed in RPQS Mumbai, Chennai and Kolkata to assist AD for checking illegal import and quality of imported pesticides.

5. Assistant Plant Protection Officers (Chem.) – 06 posts

APPOs will assist D.D./ A.D. / P.P.O in inspection and witnessing the raids and to check the veracity of the complaints. They will also assist in preparing and maintaining prosecution records, inspection reports, technical reports / test reports etc. in e-form and hard copies and providing the same promptly as and when required. APPOs will help in updating records in computer on data related to grant-in-aid to SPTLs, on statistical targets/ capacity vs achievements of State Pesticides Testing Laboratories and Regional Pesticides Testing Laboratories. Progress related to NABL accreditation of SPTLs in addition to assisting all his superiors in managing work load of the Cell. They will maintain records of all the activities of task force in electronic form like inspection reports of CIIs and the reports received from states / Uts pertaining to inspection conducted by the inspectors of the states and prosecution launched etc. They also will assist and share the workload of Plant Protection Officers as mentioned above. Any other miscellaneous duties as assigned by all his superiors from time to time.

6. Law Officer- 03 No.

Law officers will scrutinise the inspection reports for any violation of The Insecticides act., 1968 and formulate the matter for launching of prosecution in the court of law against the defaulting firm or person, who will be found to be involved in illegal import, manufacturing and selling of pesticides/Bio-pesticides/Bio-products. They will defend the cases filed by the Insecticide Inspectors as and when required as public prosecutor.

7. Legal Assistant-05 No.

Legal Asstt will assist Law officers in preparing court cases matters and escort Insecticide Inspectors in the court of law for launching prosecution. They will also follow up the cases of retired Insecticide Inspectors. They will also assist head of TLC in matters related with court cases RTI and other grievances received from various stakeholders.

8. Multi Tasking Staff (MTS)-05 No.

They will assist the officers of TLC in disposing of the work related to diary despatch, communication received and issued, transfer of files and letters to other units of directorate, photocopying of documents

Year-wise break up of outlay for the component
“National Pesticides Reference Repository (NPRR)” during 2017-20

Sr. No.	Sub Head	Year-wise planning of outlay (Rs. In Lakhs)		
		2017-18	2018-19	2019-20
A.	Recurring			
1	Salaries	405.27	450.0	450.0
2	Wages	0.00	0.00	0.00
3	OTA	1.75	2.25	2.75
4.	Medical Treatment	5.50	6.00	6.00
5.	DTE	5.00	5.50	6.00
6.	Foreign Travel Expenses	8.00	8.00	9.00
7.	Office Expenses	12.00	14.00	41.00
8.	Supply & Material	14.00	16.00	18.00
9	Professional services	3.00	3.50	4.00
10	Other Administrative services	6.00	6.00	6.00
11	Minor works	6.00	6.00	7.00
12	Contractual posts	25.00	25.00	42.00
	SUB-TOTAL (A)	491.52	542.25	591.75
B.	Non-recurring			
1	Machinery & Equipment	352.00	921.5	50.00
2.	Motor Vehicle	0.00	15.00	0.00
3	Contractual Services	12.00	12.00	14.00
4	Capital	100.00	50.00	00.00
5	Grants-in-aid	0.00	0.00	0.00
	SUB-TOTAL(B)	464.0	998.5	64.0
	TOTAL(A+B)	955.52	1540.75	655.75

Annexure VIII-A

List of proposed equipments for NPRR

S. No.	Name of the equipment	quantity	cost	Total (in crore)
1.	NMR	1	5.0	5.00
2.	LC-MS/MS	2	1.5	3.00
3.	GC-MS/MS	2	0.90	1.80
4.	High Pressure Liquid Chromatography (HPLC)	2	0.25	0.50
5.	Preparative HPLC	2	0.50	1.00
6.	Gas Liquid Chromatograph (GLC)	2	0.20	0.40
7.	FTIR	1	0.14	0.14
8.	UV-Visible Spectrophotometer	1	0.08	0.08
9.	Analytical Balance	2	0.25	0.50
10.	Weighing Balance	1	0.015	0.015
11.	Miscellaneous equipment		0.30	0.30
	Total			12.735

Year-wise break up of outlay for the component
“National Pesticides Investigational Laboratory (NPIL)”during (2017-20)

Sr. No.	Sub Head	Year-wise planning of outlay (Rs. In lakhs)		
		2017-18	2018-19	2019-20
A.	Recurring			
1	Salaries	374.16	374.16	400
2	Wages	0.00	0.00	0.00
3	OTA	1.75	2.25	2.75
4.	Medical Treatment	5.50	6.00	6.00
5.	DTE	5.00	5.50	6.00
6.	Foreign Travel Expenses	8.00	8.00	9.00
7.	Office Expenses	12.00	14.00	41.00
8.	Supply & Material	14.00	16.00	18.00
9	Professional services	3.00	3.50	4.00
10	Other Administrative services	6.00	6.00	6.00
11	Minor works	6.00	6.00	7.00
12	Contractual posts	25.00	25.00	42.00
	SUB-TOTAL (A)	460.41	466.41	541.75
B.	Non-recurring			
1	Machinery & Equipment	349.20	701.3	50.00
2.	Motor Vehicle	0.00	15.00	0.00
3	Contractual Services	0.00	12.00	14.00
4	Capital	100.00	50.00	00.00
5	Grants-in-aid	0.00	0.00	0.00
	SUB-TOTAL(B)	449.20	778.3	64
	TOTAL(A+B)	909.61	1244.71	605.75

Annexure IX-A

List of proposed equipments for NPIL

S. No.	Name of the equipment	Quantity	Cost (in crores)	Total (in crores)
1.	LC-QTOF	1	2.5	2.5
2.	LC-MS/MS	1	1.5	1.5
3.	GC-QTOF	1	2.0	2.0
4.	GC-MS/MS	1	0.90	0.90
5.	High Pressure Liquid Chromatography (HPLC)	2	0.25	0.50
6.	Gas Liquid Chromatograph (GLC- FID)	2	0.20	0.40
7.	FTIR	1	0.14	0.28
8.	UV-Visible Spectrophotometer	1	0.08	0.16
9.	lab equipment for microbial biopesticide testing	1	0.30	0.60
10.	lab equipment for microbial entomology lab testing	1	0.30	0.60
11.	Precision Analytical Balance	3	0.25	0.75
12.	Weighing Balance	1	0.015	0.015
13.	Miscellaneous		0.30	0.30
	Total			10.505

Annexure X

TOTAL BUDGET OUTLAY FOR ONGOING AND NEW ACTIVITIES OF THE SCHEME " STRENGTHENING & MODERNIZATION OF PLANT QUARANTINE FACILITIES" FOR THE ACTION PLAN PERIOD (2017-18 to 2019-20)				
Code	Sub-Head	Year wise Phasing of Outlay (Rs. In lakhs)		
		2017-18	2018-19	2019-20
A - Budget Outlay for Ongoing & New Activities:				
	A. Recurring:			
10501	Salaries	2185	10228.49	11762.82
10502	Wages	12	13	15
10503	Overtime Allowance	12	13	15
10505	MT	37	42	49
10511	Domestic Travel Expenses	127	145	167
10512	Foreign Travel	127	145	167
10513	Office expenses	633	727	836
10514	Rent/ Rate/Taxes	242	278	319
10521	Material & Supplies	14	16	18
10516	Publication	14	16	18
10520	Other Administrative Expenses	50	60	75
10526	Advertisement & Publicity	11	13	15
10528	Professional Services	46	453	461
10530	Contractual Services	161	185	213
10531	Grants- in aid	81	92	106
Total of A :		3752	12426.49	14236.82
10527	Minor works	104	119	137
10551	Motor Vehicles	40	195	180
10552	Machinery & Equipment	985.00	1700	597.20
10553	Capital	800	2200	1500
Total of B:		1929	4214	2414.2
Grand Total:		5681	16640.49	16651.02

Annexure X-A**List of New Plant Quarantine Stations (16) proposed to be established during the Plan Period at the notified points of entry**

S.No.	Proposed PQ Stations
1	Gorifanta (U.P.)
2	NamPong, Arunchal Pradesh
3	Sutarkandi (Karimgunj, Assam)
4	Changrabandha
5	Dowki, Meghalaya
6	Indian hilli, WB
7	Allepy
8	Mehdipur
9	Indore
10	Gojhaadanga-Basirhat
11	Nagpur
12	Nathu-la Bortder
13	Galgalia Border
14	Pashupathi
15	Jaigoan-Phuentosholing Border
16	Fulbari

Annexure X-B

Requirement of funds under the Capital Head during 2017-18 to 2019-20

A. Land & Building Cost for the existing Plant Quarantine's Stations(PQS)

PQ stations	No. Stations to be covered during the Plan period	Unit cost of land & building (Rs. In lakh)	Total cost of land & building (Rs. in lakh)
,Guwahati, Raxaul, Sanauli, Rupadiah and Jogbani	06	100	600
Panitanki, Jamnagar, Kalimpong, Trivendrum, Triuchirapalli, Nava sheva (JNPT), Hyderabad, Haldia, Pipava	06	200	1200
Kandla, Visakhapatnam, Tuticorin, Bangalore, Cochin	04	Kandla – 500 Vishakhapatnam – 300 Tuticorin – 300 Cochin – 300	1400
TOTAL	16		3200

B.Land & Building Coast for the new proposed PQS's :

PQ Stations	No. Stations to be covered during the Plan period	Unit cost of land & building (Rs. In lakh)	Total cost of land & building (Rs. in lakh)
Okha, Beypore, Pondicherry, Karwar, Paradeep, Alleppy, Machlipatinam, Moreh, Vizhinjam and Haldia	03	300	900
Mundra, Ahmedabad	02	200	400
TOTAL	05		1300

Summary of requirement of funds under Capital (Major Works)
During 2017-18 to 2019-20

Particulars	Total Requirement (Rs. in lakh)
Cost of land and building for the existing PQ Stations	3200
Cost of land and building for the new proposed PQ Station	1300
Total:	4500

Summary of Statements of Equipments Proposed**Estimate of equipments for the existing and New PQS's:**

PQ Stations	Unit cost per station in Rs. (lakhs)	Total cost in Rs. (Lac)
New Delhi, Mumbai, Chennai, Kandla, Mundra, Visakhapatnam, Trivendrum	34.7	242.90
Lucknow, ICD Sanand, KrishanaPattinam,Haldia Pipavav,Cochin Airport,Panitanki,Mangalore, Kakinada, Nava Sheva, Agartala, Guwahati, Okha, Raxual, Sanauli, Banbasa,Rupaidiha, Verawal,Pondicherry (Karaikal), Machalipattnam, Cuddalore, Jogbani,Karwar, Thiruvananthapuram(Vizhinjam), Attari- Wagah Border , Air Cargo, Delhi Airport, Calicut Airport Paradeep,Bhuvneshvar, Coimbatore,Baghdogra Airport, Slamabad, Chakandabagh, Kalimpong Triuchirapalli, Jamnagar, Moreh, Gopalganj, Bhavnagar, Air Cargo, Mumbai, Air Cargo, Kolkata ICD Tuglakabad, Bongaon.	15.35	660.05
Gojhaadanga-Basirhat, Mehdipur, Indian hills (WB), Changrabandha, Fulbari, Jaigoan-Phuentosholing Border Pashupathi, Galgalia Border, Nathu-la Bortder (Sikkim), Nagpur, Gade (Railway), Goa, Allepey(Kerla), Zokhwathar (Mizoram), Dowki (Meghalaya), Port Blair (A&N), Sutarkandi (Karimgunj,Assam), Nampong (Arunachal Pradesh), Gaurifanta (Lakhimpur Kheri, U.P)	15.35	291.65
Six X-ray baggage scanner (Organic type) unit at major International Airport	35.00	210.00
GC-MS	100.00	800.00
LC-MS	100.00	800.00
Tablets	0.2000	19.800
TOTAL:		3024.4

Annexure X-D

List of Equipments for Plant Quarantine Stations

Sl.No	Name of the Equipment	Approx Cost of equipment (Rs in Lakhs/unit)
1	Laboratory Refrigerator	0.4
2	Magnoscope	0.1
3	Insect storage cabinet and boxes	0.4
4	Nematode extraction sieve set	0.2
5	Oven	0.7
6	Autoclave	2
7	Laminar Air Flow	3
8	BOD Incubator	1.25
9	ELISA Reader	5.00
10	pH Meter	0.20
11	PCR Thermal cycler	7.50
12	Electrophoresis Apparatus	0.6
13	Digital Balances(Each) 10gm -1000gm	0.4
14	Micro centrifuge	2
15	Vortex	0.20
16	Distillation unit	0.80
17	Micropipette	0.05
18	Wrist action shaker	0.4
19	Seed Germination Box	0.0006
20	Phase Contrast Research Microscope with Image Analysis System	8.00
21	Coumpound Microscope	1.50
	Total	34.70

ANNEXURE X-E

Post wise (Existing post and proposed post) details of existing PQS

S.No.	Stations	JD		DD		AD		PPO		APPO		SA		TA		ADMN.O		UDC		LDC		MTS		Driver	
		S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P
1.	Agartala	-	-	-	-	-	-	-	1	2	-	1	1	-	1	-	-	-	-	-	-	1	2	-	1
2.	Guwahati	-	-	-	-	-	-	1	1	3	-	1	-	-	1	-	-	-	-	-	-	1	2	-	1
3.	Lucknow	-	-	-	1	-	3	1	6	2	12	1	10	1	9	-	1	-	1	-	1	-	1	-	1
4.	Okha	-	-	-	-	-	-	1	1	2	1	1	1	1	1	-	-	-	-	-	-	2	-	1	1
5.	Mundra	-	1	-	3	1	5	1	12	4	23	1	25	1	9	-	1	-	1	-	1	-	1	-	1
6.	Raxual	-	-	-	-	-	-	1	-	3	1	2	-	-	1	-	-	-	-	-	-	2	-	1	1
7.	Sonauli	-	-	-	1	-	3	1	5	3	12	2	11	-	10	-	1	-	1	-	1	-	1	-	1
8.	ICD Sanand Ahamadabad	-	-	-	1	-	3	-	6	-	12	-	12	-	10	-	-	-	-	-	-	2	-	1	1
9.	Banbasa	-	-	-	-	-	-	1	-	3	-	2	1	-	1	-	-	-	-	-	-	2	-	1	1
10.	Rupaidiha	-	-	-	-	-	-	1	-	3	1	2	1	-	1	-	-	-	-	-	-	2	-	1	1
11.	Verawal	-	-	-	-	-	-	1	-	2	1	1	1	1	1	-	-	-	-	-	-	2	-	1	1
12.	Pondicherry (Karaikal)	-	-	-	-	-	-	2	-	2	-	1	1	1	1	-	-	-	-	-	-	2	-	1	1
13.	Machalipattnam	-	-	-	-	-	-	1	1	2	1	1	1	1	1	-	-	-	-	-	-	2	-	1	1
14.	Cuddalore	-	-	-	-	-	-	1	-	2	-	1	-	1	1	-	-	-	-	-	-	2	-	1	1
15.	Jogbani	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.	Krishana Pattinam	-	-	-	1	-	3	1	5	2	12	1	11	1	10	-	1	-	1	-	1	-	1	-	1
17.	Karwar	-	-	-	-	-	-	1	-	2	1	1	1	1	1	-	-	-	-	-	-	2	-	1	1
18.	Thiruvananthapuram (Vizhinjam)	-	-	-	-	-	-	1	1	2	1	1	1	1	1	-	-	-	-	-	-	2	-	1	1
19.	Attari-Wagah Border-Rly. Stn	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	2	-	1	1
20.	Amritsar Rly. Stn.	-	-	-	-	-	-	-	1	3	1	-	1	-	1	-	-	-	-	-	-	2	-	1	1
21.	Air Cargo, Delhi Airport	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	2	-	1	1
22.	Calicut Airport	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	2	-	1	1
23.	Paradeep	-	-	-	-	-	-	2	-	2	1	1	1	1	1	-	-	-	-	-	-	2	-	1	1
S.No.	Stations	JD		DD		AD		PPO		APPO		SA		TA		ADMN.O		UDC		LDC		MTS		Driver	
		S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P
24.	Haldia	-	-	-	1	-	3	2	5	3	11	1	12	2	10	-	1	-	1	-	1	-	1	-	1
25.	Pipavav	-	-	-	1	-	3	-	5	3	12	-	11	-	10	-	1	-	1	-	1	-	1	-	1
26.	Coimbatore	-	-	-	-	-	-	-	1	2	-	-	1	-	1	-	-	-	-	-	-	1	1	-	1

27.	Baghdogra Airport	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	1	-	1
28.	Cochin Airport	-	-	-	-	-	-	-	1	2	1	-	1	-	1	-	-	-	-	-	-	-	2	-	1
29.	Slamabad	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	2	-	1
30.	Chakandabagh	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	2	-	1
31.	Panitanki	-	-	-	1	-	3	1	5	5	11	1	12	2	10	-	1	-	1	-	-	2	-	-	1
32.	Kalimpong																								
33.	Trivendrum	-	-	-	1	-	3	1	5	2	10	1	11	1	10	-	1	-	-	-	1	2	1	-	1
34.	Tiruchirapalli	-	-	-	1	-	3	-	6	3	12	1	11	1	10	-	1	-	1	-	1	1	1	-	1
35.	Jamnagar	-	-	-	-	-	-	2	1	2	1	2	1	1	1	-	-	-	-	-	-	-	2	-	1
36.	Moreh	-	-	-	-	-	-	1	-	2	1	2	1	1	1	-	-	-	-	-	-	-	2	-	1
37.	Gopalganj	-	-	-	-	-	-	-	1	2	-	2	1	1	1	-	-	-	-	-	-	-	2	-	1
38.	Bhavnagar	-	-	-	-	-	-	2	1	4	1	1	1	2	1	-	-	1	-	-	-	2	1	-	1
39.	Air Cargo, Mumbai	-	-	-	-	-	-	-	1	3	1	-	1	-	1	-	-	-	-	-	-	-	2	-	1
40.	Air Cargo, Kolkata	-	-	-	-	-	-	-	1	3	-	-	1	-	1	-	-	-	-	-	-	-	2	-	1
41.	Mangalore	-	-	-	1	-	3	3	5	4	8	2	12	-	10	-	1	-	1	-	1	-	1	-	1
42.	Kakinada	-	-	-	1	-	3	2	5	3	9	2	11	-	10	-	1	-	1	-	1	-	1	-	1
43.	ICD Tuglakabad	-	-	-	-	-	-	-	1	3	1	-	1	-	1	-	-	-	-	-	-	-	2	-	1
44.	Visakapatnam	-		-	1	-	3	1	6	6	10	2	12	1	10	-	1	1	-	1	-	5	-	-	1
45.	Tuticorin	-	1	-	3	-	6	2	10	7	19	2	25	3	9	-	1	1	1	1	-	2	5	-	1
46.	Cochin	-	1	-	3	1	3	6	10	6	21	2	23	2	8	-	1	2	-	1	-	5	-	1	1
47.	Bongaon	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	2	-	1
48.	Hyderabad	-	-	-	1	-	3	1	6	4	10	1	12	-	9	-	1	-	-	-	1	1	-	-	1
49.	Attari-Wagah Border – LCS	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	2	-	1
50.	Nava Sheva	-	-	1	1	-	3	-	6	4	12	2	12	-	10	-	1	-	1	-	1	-	1	-	1
51.	Kandla	-	1	-	3	1	5	3	10	6	23	4	24	1	10	-	1	-	1	-	1	-	1	-	1
52.	Bangalore	-	1	1	3	1	6	3	11	5	21	3	22	-	10	-	1	-	1	-	1	-	1	-	1
53.	Goa	-	-	-	-	-	1	-	1	-	1	-	1	-	1	-	-	-	-	-	1	-	2	-	1
54.	Nashik	-	-	-	-	-	1	-	1	-	1	-	1	-	1	-	-	-	-	-	1	-	2	-	1
55.	Indore	-	-	-	-	-	1	-	1	-	1	-	1	-	1	-	-	-	-	-	1	-	2	-	1
56.	Port Blair	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	1	-	2	-	1
	Gede (WB)	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	1	-	2	-	1
	Total		5	2	29	4	70	46	156	126	288	52	312	29	219	-	18	5	14	3	19	23	89	1	57

S-Sanctioned
P-Proposed

ANNEXURE X-F

NEW PROPOSED STATIONS (16 nos.)

List of New Plant Quarantine Stations (16) proposed to be established during the Plan Period at the notified points of entry and their categorization based on the quarantine activities likely to be handled.

																	Total		
																	Gorifanta (U.P.)		
																	NamPong, Arunchal Pradesh		
																	Sutarkandi (Karimgunj, Assam)		
																	Dowki, Meghalaya		
																	Zokhwathar, Mizoram		
																	Allepy		
																	Nagpur		
																	Nathu-la Bortder		
																	Galgalia Border		
																	Pashupathi		
																	Jaigoan-Phuentosholing Border		
																	Fulbari		
																	Changrabandha		
																	Indian hilli, WB		
																	Mehdipur		
																	Gojhaadanga-Basirhat		
ADs	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	
PPOs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
APPOs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
SAs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
TAs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
MTSs	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	29
LDCs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
Drivers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
Total																		126	

Annexure XI**Year-wise break up of outlay for the component
“Monitoring of Pesticide Residue at the National Level (MPRNL)” during (2017-20)****(Rs. In Crore)**

Head		2017-18	2018-19	2019-20
Recurring	Pay (Contractual manpower)	10.0	11.0	12.0
	TA	2.5	2.5	2.5
	RC	10.0	11.0	12.0
Non-Recurring	Equipment's	65.0	11.6	11.6
Total		87.5	36.1	38.1

Annexure XI-A

Tentative cost of equipment for MPRNL Scheme for various participating Laboratories

(Rs. in crores)

S.No.	Name of equipment	Number of equipment	Cost of each equipment	Total cost
1.	Gas Chromatograph (GC)	21	0.30	6.30
2.	Gas Chromatograph- Mass Spectrophotometer (GC-MS-MS)	21	0.90	18.90
3.	Liquid Chromatograph-Mass Spectrophotometer (LC-MS-MS)	20	2.0	40.00
Total cost of equipment				65.20

Distribution of Equipments

S.No.	Laboratory	Name of the equipment		
		GC	GC-MS-MS	LC-MS-MS
1.	Project Coordinating Cell, IARI, New Delhi	2	2	1
2.	Dr. Y.S.P. Univ. of Horticulture & Forestry, Nauni, Solan	1	1	1
3.	Punjab Agricultural University, Ludhiana	1	1	1
4.	Mahatma PhuleKrishiVidyapeeth, Rahuri	1	1	1
5.	Kerala Agricultural University, Vellayani	1	1	1
6.	Indian Insatiate of Horticultural Research, Bangalore	1	1	1
7.	Rajasthan Agriculture Research Institute, Jaipur	1	1	1
8.	Professor JayashankarTelagana State Agricultural University, Hyderabad	1	1	1

9.	Tamil Nadu Agricultural University, Coimbatore	1	1	1
10.	Institute of Pesticide Formulation Technology (IPFT), Gurgaon	1	1	1
11.	National Institute of Occupational Health, Ahmedabad	1	1	1
12.	Western Region Referral Laboratory, Department of Veterinary Public Health, Bombay Veterinary College, Mumbai	1	1	1
13.	Marine Products Export Development Agency, Kochi	1	1	1
14.	Indian Institute of Toxicology Research, Lucknow	1	1	1
15.	Central Pollution Control Board, Delhi	1	1	1
16.	National Environmental Engineering Research Institute, Nehru Marg, Nagpur	1	1	1
17.	Bidhan Chandra KrishiVishvavidalayaKalyani, West Bengal	1	1	1
18.	Regional Plant Quarantine Station, Mumbai	1	1	1
19.	Regional Plant Quarantine Station, Chennai	1	1	1
20.	National Plant Quarantine Station, New Delhi	1	1	1
Total no. of equipment's		21	21	20

Annexure XII-B**No. of new proposed PQ laboratories (2018-19) :4****Tentative cost of equipment (Rs in crores)****(Rs. in crores)**

S.No.	Name of equipment	Number of equipment	Cost of each equipment	Total cost
1.	Gas Chromatograph-Mass Spectrophotometer (GC-MS-MS)	4	0.90	3.6
2.	Liquid Chromatograph-Mass Spectrophotometer (LC-MS-MS)	4	2.0	8.0
Total cost of equipment				11.6

No. of new proposed PQ laboratories (2019-20): 4**Tentative cost of equipment (Rs in crores)****(Rs. in crores)**

S.No.	Name of equipment	Number of equipment	Cost of each equipment	Total cost
1.	Gas Chromatograph-Mass Spectrophotometer (GC-MS-MS)	4	0.90	3.6
2.	Liquid Chromatograph-Mass Spectrophotometer (LC-MS-MS)	4	2.0	8.0
Total cost of equipment				11.6

Cost Estimates for the NIPHM**(Rs.in lakhs)**

S.No	Head of Account	2017-18	2018-19	2019-20
I	Grants in aid – Salaries			
A	Salaries	973.29	1051.15	1135.25
B	Medical Treatment	46.00	52.90	60.84
C	Overtime Allowance	1.15	1.32	1.52
	TOTAL (I)	1020.44	1105.38	1197.60
II	Grants in aid – Revenue			
A	Domestic Travel Expenses	25.00	27.50	30.25
B	Foreign Travel Expenses	10.00	11.00	12.10
C	Office Expenses	200.00	220.00	242.00
D	Rent, Rates & Taxes	7.00	7.70	8.47
E	Publications(Printing)	25.00	27.50	30.25
F	Material & Supply	65.00	74.75	85.96
G	Adv.&Publications	13.00	14.30	15.73
H	Prof. Services	110.00	121.00	133.10
I	Cont. Services	95.00	104.50	114.95
J	Other Administrative Services(Trg.Programmes)	230.00	253.00	278.30
	TOTAL (II)	780.00	861.25	951.11
	TOTAL RECURRING (A) (I+II)	1800.44	1966.63	2148.71
III	Grants for Creation of Capital Assets			
A	Motor Vehicles	0	0	0
B	Mach & Eqpt	400.00	575.00	350.00
C	Minor Works	100.00	105.00	110.00
D	Furniture & Fixtures	25.00	25.00	7.00
E	Library books	3.00	2.00	2.00
F	Major Works	900.00	1100.00	70.00
	TOTAL NON-RECURRING(B)	1378.00	1732.00	539.00
	GRNAD TOTAL (A+B)	3178.44	3698.63	2687.71