

Norms/Guidelines for, “Strengthening and Modernization of Pest Management Approach in India”

Plant protection is very important for crop production and for sustainable agriculture. Plant protection activities encompass plant quarantine, regulation of pesticides, minimizing crop loss due to pests including locust control in desert areas and training and capacity building for plant protection.

2. Under the Central Sector Scheme “Strengthening and Modernization of Pest Management Approach in India” main components of the Scheme are :

(a) **Integrated Pest Management:** Integrated Pest Management which is environment friendly broad ecological approach for managing pest problems. It encompasses pest control techniques, such as cultural, mechanical and biological with minimum dependence on chemical pesticides. Objectives of IPM are to increase crop production, reduce input cost and environmental pollution by reducing use of chemical pesticides and maintain agro-ecological equilibrium. IPM related activities are being implemented through 31 Central Integrated Pest Management Centres (CIPMCs) established in 28 States and one Union Territory. Activities under IPM are:

- (i) Survey and monitoring of insect-pests and diseases in important pest prone crops.
- (ii) Conservation and augmentation of natural enemies of pests.
- (iii) Production and release of bio-control agents by Central Integrated Pest Management Centres (CIPMCs).
- (iv) Human resource development (HRD) through Farmers’ Field Schools (FFSs), Season Long Training Programmes (SLTPs), Short Duration Training Programmes including refresher courses. Cost norms for organizing FFSs and training programmes are provided in Annexe I
- (v) Funding State Bio-control Laboratories (SBCLs). Funding pattern and list of equipments as at Annexe II.
- (vi) Assistance is provided to private entrepreneurs, NGOs, cooperatives, Self Help Groups, women organizations for opening mass production units of bio-control agents/bio-pesticides, for improving availability of bio-control agents and bio-pesticides to farmers for purchase of laboratory equipments for establishing bio-control laboratories. Funding norms and eligibility for funds as at Annexe III
- (vii) Rodent Pest Management for building capacity, creating awareness and conducting rodent control campaigns to reduce crop loss. Cost break up for each component under Rodent Pest Management and area for implementation is at Annexe – IV.

(b) **Locust Control and Research:** Locust Warning Organization (LWO) like defence/fire fighting organizations is capable of meeting emergency situations effectively. LWO has been implementing locust surveillance system for monitoring of solitary and gregarious population of locust, since its inception in 1939 and is responsible for monitoring and controlling desert locust over 2.00 lakh sq km in Scheduled Desert Area (SDA) in Rajasthan and Gujarat and parts of Haryana.

(c) **Implementation of Insecticides Act (IIA):** Pesticides are essential inputs for sustaining agricultural production. Pesticides are regulated under comprehensive legislation, namely, Insecticides Act, 1968 (the Act) and Insecticides Rules, 1971 (the Rules). The word 'insecticide' in the legislation covers whole range of pesticides.

Following are the main components under Insecticides Act:

- (i) Central Insecticides Laboratory was set up under Section 16 of the Act with major objectives of pre and post registration verification of properties, performance and hazards of pesticides and proposed use claimed by manufacturers.
- (ii) Central Insecticides Board (CIB) was constituted under Section 4 of the Act to advise Central and State Governments on technical matters arising out of administration of this Act, including matters such as risk to human beings or animals involved in use of insecticides and safety measures necessary to prevent such risk and on matters relating to manufacture, sale, storage, transport and distribution of insecticides.
- (iii) Registration Committee (RC) was constituted under Section 5 of Insecticides Act, 1968, to scrutinize formulae of pesticides, verify claims regarding efficacy and safety to human beings and animals, specify doses, take precautions against poisoning etc. to be printed on label and leaflets. Registration Committee registers pesticides under Section 9 of Act after verifying their efficacy and safety to human beings and environment.
- (iv) Regional Pesticides testing Laboratories (RPTLs) and State Pesticide Testing Laboratories (SPTLs). Grant in aid to the tune of Rs 95 lakh will be provided to SPTLs viz: Rs 50 lakh for equipments and Rs 45 lakh for building. List of equipments for setting up SPTL is at Annexe –V. Efforts will be made to set up new SPTLs in States/ UTs which do not have SPTL and to strengthen quality control testing facilities in States already having SPTLs.
- (v) Setting up of a National Pesticide Reference Repository (NPRR) (cost Rs. 8.83 crore) to provide pesticide reference standards to pesticide testing laboratories to improve quality of testing.

- (vi) Setting up of a National Pesticide Investigational Laboratory (NPIL) (cost Rs. 13.32 crore) in context of growing concern about spurious pesticides, including bio-pesticides, adulterated with unauthorized chemicals. NPIL would not only check such products but would also audit functioning of pesticide testing laboratories.
- (vii) Creation of bio-pesticide testing facilities in RPTLs, 5 regional CIPMCs and SBCLs / SPTLs in context of rapid increase in consumption of bio-pesticides and concern about their quality. List of equipments for bio-pesticide testing for SPTLs/SBCLs, RPTLs/ CIPMCs is at Annexe-VI.
3. Funding pattern for XI Plan for the Scheme is as under:

Components	Recurring	Non-recurring	Total (Rs. in lakh)
A. IPM	4091.16	2318.16	6409.32
B. LCR	299.40	366.60	662.40
C. IIA	2622.72	4362.20	6984.92
Grand Total	7013.28	7043.36	14056.64

Detailed cost break up of each of the three components is at Annexe-VII.

Annexe I

Norms for 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)

	Item	Amount (Rs.)
1.	Refreshment @ Rs. 20/- per trainee for 14 number of programmes (30x20x14)	Rs. 8,400
2.	Expenditure on POL/hiring of vehicles	2,500/5,000*
3.	Contingent expenditure, Banners and refreshment for inaugural function of FFS	Rs.1,800/-
4.	Distribution of (i) Cost of training material including IPM kit @ Rs. 150/- per kit = Rs. 4,500 (ii) Cost of pheromones/biopesticides, emergency spray, other relevant training materials including planting of at least 100 neem trees. = Rs. 2000	Rs. 6,500
5.	Distribution of IPM literature and agricultural implements for cultural/mechanical practices for 30 trainees @ Rs. 100 per trainee	Rs.3,000/-
6.	Farmers' Field Day (one day) Miscellaneous contingent expenditure including refreshment	Rs.1,500/-
7.	Honorarium for two facilitators/trainers @ Rs. 1500/- each for complete season	Rs. 3,000/-
	Total expenditure for conducting one FFS by State Govts./SAUs/KVKs	Rs. 26,700
	Total expenditure for one FFS by NGOs/Private bodies	Rs. 29,200

N.B. * Contingent expenditure on POL/hiring of vehicles will be Rs. 2,500/- per FFS for Government and Public Sector Organization viz., State Government/KVKs/SAUs/ICAR Institutes and Rs. 5,000/- for NGOs and private bodies.

IPM ORIENTATION TRAINING (One Week - 5 days)

BUDGET DETAILS FOR ACCOMODATION, CATERING, P.O.L. ETC.

UNDER IPM COMPONENT

1. Accommodation	Rate	Maximum Amount (Rs.)
(i) Trainees	@ Rs.250 per day for 40 trainees for 5 days (250 x 40 x 5)	Rs.50,000
(ii) Resource persons	@ Rs.500 per day for 4 Resource Persons for 5 days(500 x 4 x 5)	Rs.10,000
2. Catering Expenses		
(i) Trainees & trainers etc.	@ Rs.300 per day for 53 trainees for 5 days(300 x 53 x 5)	Rs.79,500
3. Training accessories		
(i) Training equipment including IPM Kit	@ Rs.150 per IPM Kit for 40 persons (150 x 40)	Rs.6,000
4. POL & Minor repairs/hiring charges of vehicles	@ Rs.400 per day for 5 days (400 x 5)	Rs.2,000
5. Other expenses		
(i) Stationery	Rs.200/- per day	Rs.1,000
(ii) Inaugural Function Banners Seating arrangement Tea for 100 persons @ Rs.10/- per head		Rs. 500 Rs. 500 Rs.1,000
(iii) Valedictory function Seating arrangement Tea for 60 persons @ Rs.10/- per head		Rs.500 Rs.600
(iv) Contingency		Rs.500
Total		Rs.1,52,100/-

IPM ORIENTATION TRAINING (2 days)

1.Catering Expenses	Rate	Maximum Amount Rs.
(i) Trainees & trainers etc.	@ Rs.300 per day for 53 trainees for 2 days (300 x 53 x 2)	Rs.31,800
2. Training accessories		
(i) Training and awareness literature	@ Rs.50 for 40 persons (50 x 40)	Rs.2,000
3. POL & Minor repairs/ hiring charges of vehicles	@ Rs.400 per day for 2 days (400 x 2)	Rs.800
4. Other expenses		
(i) Stationery	Rs.200/- per day	Rs.400
(ii) Inaugural Function		
(a) Banners		Rs. 500
(b) Seating arrangement		Rs. 500
(c) Tea for 100 persons @ Rs.10/- per head		Rs.1,000
(iii) Valedictory function		
(a) Seating arrangement		Rs.500
(b) Tea for 60 persons @ Rs.10/- per head		Rs.600
(iv) Contingency		Rs.500
Total		Rs.38,600/-

Pattern of Expenditure for Season Long Training Programme

(Training of Facilitators/Master Trainers)

S. No.	Description of items/activities	Amount	Total cost for 30 days	Total cost for 60 days	Total cost for 90 days
1.	Accommodation:				
	- Participants (40 trainees) on twin sharing basis	Rs. 500 per day	Rs.3,00,000	Rs.6,00,000	Rs.9,00,000
	- Support staff (5 persons) on twin sharing basis	Rs. 500 per day	Rs.37,500	Rs 75,000	Rs.1,12,500
	-Resource persons (8) on single accommodation	Rs. 500 per day	Rs,120,000	Rs 2,40,000	Rs.3,62,000
	Total cost (accommodation):		Rs.4,57,500	Rs.9,15,000	Rs.13,74,500
2.	Catering expenses for 53 persons	Rs.300 per day	Rs.4,77,000	Rs.9,54,000	Rs.14,31,000
3.	Training Expenses:				
	(a) IPM Training Kit & fields materials (40 trainees)	Rs.1000 per trainee	Rs.40,000	Rs. 40,000	Rs.40,000
	(b) Book/Stationery/Dissertation (40 trainees)	Rs.500/trainee	Rs.20,000	Rs. 20,000	Rs.20,000
	Total cost (Training expenses):		Rs.60,000	Rs. 60,000	Rs.60,000
4.	POL & Minor repair/Vehicle Hiring charges:	Rs.800 per day	Rs.24,000	Rs. 48,000	Rs.72,000
5.	Other expenses :				
	(a) Stationery		Rs.20,000	Rs.30,000	Rs.35,000
	(b) Training materials		Rs. 10,000	Rs.10,000	Rs.10,000
	Total cost (Other expenses) :		Rs.30,000	Rs.40,000	Rs.45,000
6.	Inaugural function :				
	- Banners		Rs.1,000	Rs.1,000	Rs.1,000
	- Seating arrangement		Rs.1,000	Rs.1,000	Rs.1,000
	- Tea &snacks (for 100 persons)		Rs.1,000	Rs.1,000	Rs.1,000
	- Working lunch (for 50 persons)	Rs.10 per person	Rs.1,000	Rs.1,000	Rs.1,000
		Rs.100 per person	Rs.5,000	Rs.5,000	Rs.5,000
	Total Cost (Inaugural function)		Rs.8,000	Rs.8,000	Rs.8,000

7.	Valedictory function : <ul style="list-style-type: none"> - Banners - Seating arrangement - Tea & snacks (for 100 persons) - Working lunch (for 50 persons) 		Rs.1,000 Rs.1,000 Rs.1,000 Rs.5,000	Rs.1,000 Rs.1,000 Rs.1,000 Rs.5,000	Rs.1,000 Rs.1,000 Rs.1,000 Rs.5,000
	Total cost (Valedictory function) :		Rs.8,000	Rs.8,000	Rs.8,000
8.	Honorarium <ul style="list-style-type: none"> - Resource person (8) - Guest Resource person (5 for 10 days in 30 days course) (5 for 20 days for 60 days course) (5 for 20 days for 90 days course) 	Rs.500 per day Rs.800 per day	Rs.1,20,000 Rs.40,000	Rs.2,40,000 Rs.80,000	Rs.3,60,000 Rs.1,20,000
	Total cost (Honorarium)		Rs.1,60,000	Rs.3,20,000	Rs.4,80,000
9.	Contingency:		Rs. 10,000	Rs. 15,000	Rs. 20,000
10.	Traveling Allowance (For trainees of North Eastern Region)		Rs. 10,000	Rs. 10,000	Rs. 10,000
	Total cost (Traveling Allowance)		Rs. 10,000	Rs. 10,000	Rs. 10,000
	GRAND TOTAL :		Rs.12,44,500	Rs.23,78,000	Rs.35,08,500

Annexell

Funding pattern:

(a) For setting up new SBCL:

- a) Rs. 45.00 lakh for building
- b) Rs. 25 lakh for equipments as listed below

(b) For strengthening of SBCL funds up to Rs. 20.00 lakh can be provided for equipments only excluding vehicle.

List of Equipments for CIPMCs and SBCLs

S. No.	Item	No.	Approx Cost (in Rs./Unit)	Total amount (in lakh.)
1	Heat convector	20	2,000	40,000
2	Steel racks (7x3x18) (with 6 compartments)	20	1,000	20,000
3	Chrysopa cages	20	1,000	20,000
4	Laboratory tables	5	7,000	35,000
5	Laboratory stools	20	250	5,000
6	Hygrometer (Dail type)	10	400	4,000
7	Thermometer (Dail type)	10	400	4,000
8	Mixture-cum-grinder	2	2,000	4,000
9	Corcyra egg laying cages	50	200	10,000
10	UV Chamber with UV tubelight	2	1,500	3,000
11	Exhaust Fan	10	1,000	10,000
12	Vacuum cleaner	2	4,000	8,000
13	Water Distillation Unit	1	2,000	2,000
14	Glasswares (Petri dishes, Jars, Flask etc.)	-	-	60,000
15	Air Conditioner with cooling and heating arrangement with 4 KVA Stabilizer	8	50,000	4,00,000
16	Refrigerator 300 Lit capacity with 1 KVA Stabilizer	2	20,000	40,000
17	Hot Air Oven	2	40,000	80,000
18	BOD Incubator with temp. humidity and photo period provision with 1 KVA stabilizer	2	80,000	1,60,000
19	Centrifuge	2	8,000	16,000
20	Laminar Flow	1	24,000	24,000
21	Autoclave vertical	1	20,000	20,000
22	Semi automatic Corcyra rearing system	50	10,000	5,00,000
23	Microscope (Research with accessories)	1	1,00,000	1,00,000
24	Stereo Binocular Microscopic	1	50,000	50,000
25	Top loading electronic balance	1	35,000	35,000
26	Vehicle Diesel Jeep with trailer	1	5,00,000	5,00,000
27	Miscellaneous lab. Items	-	-	3,50,000
	Total			25,00,000

**GUIDELINES FOR
PHYSICAL VERIFICATION AND TECHNICAL AUDIT
OF BIOCONTROL LABORATORIES ESTABLISHED BY NGOs, PRIVATE
ENTREPRENEURES, SELF HELP GROUPS, WOMEN
ORGANISATION, FARMERS CLUB
UNDER GRANTS-IN-AID**



Government of India

Ministry of Agriculture

Department of Agriculture & Cooperation

Directorate of Plant Protection, Quarantine & Storage

N.H.-IV, Faridabad – 121 001

September, 2010

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Endorsement

This Standard entitled “Guidelines for Physical Verification and Technical Audit of Biocontrol Laboratories established by NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club under Grants-in-aid by Government of India” has been prepared by IPM Division, Directorate of Plant Protection, Quarantine & Storage, Faridabad – 121001 (Haryana) for rendering the guidance to the beneficiaries, effective work monitoring and auditing of facilities possessed by the laboratories.

This Standard is duly approved for adoption on _____, 2010

(S.K.G. Rahate)
Plant Protection Adviser
to the Government of India

Review and Amendment

This Standard will be periodically reviewed and amended as and when desired and decided by the Plant Protection Adviser to the Government of India. The holders of this Standard shall ensure that the current edition of the Standard is being used.

Control and Distribution of the Standard

The master copy of this Standard shall be held by the Plant Protection Adviser to the Government of India and controlled copies will be distributed by Director, IPM to all CIPMCs located throughout the countries, Directors of Agriculture/Horticulture of all States/UTs and NGOs to whom Grants-in-aid has been released. This Standard can be freely reproduced for official use. However, any alterations and modification to this Standard can be made only with the written approval of Plant Protection Adviser to the Government of India. Any enquiry to this Standard shall be made to Director, IPM, Directorate of Plant Protection, Quarantine & Storage, N.H.-IV, Faridabad.

Control Copy Holders

S.No.	Name
1.	Director, IPM, Dte. of PPQ&S, Faridabad
2.	Deputy Director (E/PP), IPM, Dte. of PPQ&S, Faridabad
3.	Assistant Director (E/PP), Dte. of PPQ&S, Faridabad
4.	PPO(E/PP), Dte. of PPQ&S, Faridabad
5.	Officer-in-charge, CIPMC, Hyderabad, Andhra Pradesh
6.	Officer-in-charge, CIPMC, Port Blair, A&N Islands
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33.	Officer-in-charge, CIPMC, Shillong, Meghalaya
34.	Officer-in-charge, CIPMC, Agartala, Tripura
35.	Officer-in-charge, CIPMC, Dehradun, Uttrakahand

Introduction

Adoption of modern agricultural technology comprising of introduction of high yielding crop varieties, use of chemical fertilizers, assured irrigation and improved agronomic practices during late 60s and 70s has enabled the Indian farmers in increasing the crop production 2 to 3 folds. However, such an intensive cropping system has also paved the way for emergence of various pest problems. To overcome serious pest outbreak, farmers were motivated to adopt prophylactic control measures with more emphasis on application of chemical pesticides. However, indiscriminate and injudicious use of pesticides for the control of various pests has resulted in several adverse effects viz., development of resistance in pests to pesticides, resurgence in pests, pesticide residues in food, fodder, soil, water, pesticides poisoning and health hazards to human beings, wild-life and live-stocks, environmental pollution, ecological imbalance and outbreak of secondary pests. It has been observed that pests which were of minor importance hitherto now have attained major pest status causing considerable economic loss to the farmers. This is because the natural enemies of these pests (parasitoids, predators and pathogens) which were maintaining pest population under economic threshold level have either been completely destroyed or their population has been considerably reduced by indiscriminate and injudicious use of chemical pesticides. Hence, augmentation and conservation of these natural enemies is essential and need of the hour in present scenario to have bright future of the farmers.

With a view to increase the production of biocontrol agents/biopesticides to meet the increasing demand of these bioagents from the farming community, Government of India is providing Grants-in-aid to State Department of Agriculture/Horticulture for establishment of State Biocontrol Laboratories (SBCLs) since 8th Five Year Plan. Under the said programme so far funds for establishment of 38 SBCLs have been released to different States/UTs. Since 2005-06, Government of India, Ministry of Agriculture, Department of Agriculture & Cooperation has decided to provide the Grants-in-aid in the form of subsidy @ Rs. 5 lakh/lab/NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club

subject to the conditions mentioned in the guidelines so that increasing demand of bioagents by the farmers could be supplemented. Hence, the need to prepare this Standard arose.

Scope: This Standard sets out Guidelines for Establishment of Biocontrol Laboratories by NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club under Grants-in-aid from Government of India and Technical Audit of these laboratories for effective working by the officers from Directorate of PPQ&S, Faridabad.

Objective of the Standard

With a view to reduce the injudicious and indiscriminate use of chemical pesticides, the Govt. of India has adopted Integrated Pest Management (IPM), encompassing cultural, mechanical, physical, genetical, biological methods and need based use of chemical pesticides, as the cardinal principle and main plank of plant protection strategy in overall crop production programme in the country. To achieve this objective, establishment of adequate number of bio-control labs. in the country is essential. Though presently there are about 333 biocontrol laboratories engaged in production of bioagents being run by Central/State Governments, NGOs and private entrepreneurs, but these are unable to meet the increasing demands of bioagents by the farmers, Hence, the Govt. of India has decided to involve non-governmental organization (NGOs), Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club in setting up of these laboratories and provide them Grants-in-aid for purchase of equipments for this purpose.

Procedure & Minimum Expected requirements

Each organization desirous of applying for grants-in-aid under the scheme should apply in the prescribed proforma (**Appendix-I**) through any of the recommending officers authorized by Ministry of Agriculture, Department of Agriculture & Cooperation (DAC) in these guidelines (**Appendix-II**). The applicants should have the requisite accommodation with three-phase power wiring for setting up of the bio-control laboratory. The recommending officers, after inspection of such facilities and satisfying themselves about the suitability of the organizations shall forward these applications to the Plant Protection Adviser to the Government of India, Dte. of PPQS, Faridabad in the

prescribed format (**Appendix-III**). The Dte of PPQ&S would process and examine these applications and recommend to Department of Agriculture and Cooperation, New Delhi for grant of in principle approval for release of grants-in-aid to the eligible organizations. Thereafter, the concerned organizations would purchase the equipments as per list approved by Government of India (**Appendix-IV**). The actual release of funds would be made after the recommending officer has inspected the site and furnished a report that the equipments have been purchased and installed in the laboratory satisfactorily. The original bills for the purchase of equipments shall also be enclosed with this report. These organizations shall work in the field of production of bio-control agents and bio-pesticides for a minimum period of 5 years from the date of receipt of the grants-in-aid

General Conditions for release of Funds.

- (i) Organization should be registered with the State Government.
- (ii) Organization should have required accommodation in the name of organization or person associated with organization.
- (iii) Site of the buildings would be easily accessible to the farmers.
- (iv) Person heading organization must be Sr. Secondary preferably having experience in handling bio-agents/bio-pesticides.
- (v) Building must have provision of three phase power wiring to run the equipments efficiently.
- (vi) Organization must have fair track record.
- (vii) Amount of subsidy is 35% for general category & 50% for SC/ST/Women's Organizations on total cost of equipments subject to maximum of Rs.5.00 lakhs per unit. Subsidy will be released after verification of bills submitted and satisfactory installation of equipments in the lab.
- (viii) Equipments should be of standard quality/ISI marked falling under approved list for the purpose.
- (ix) Financial assistance from Government of India is one time only for purchase of laboratory equipments. The salary of staff engaged in

the laboratory and other recurring expenditure for operation of laboratory is to be borne by the organization itself.

- (x) Not more than one application from same revenue village will be entertained.
- (xi) While seeking subsidy under Grants-in-aid, application must be accompanied by building plan where laboratory has been or is to be established.
- (xii) Application, for administrative approval, should have recommendation from District Agriculture/Horticulture Officer/SAUs/Officer Incharge of CIPMC/KVK/NABARD (list attached) before submission to Directorate.
- (xiii) Application, for financial sanction, in prescribed format should be routed through CIPMC of concerned/nearby State or any other Officer authorised by the PPA. Officer Incharge of CIPMC/ other Officer authorised by the PPA will verify the case (**Appendix-V**) and send the same to Directorate of PPQ&S for acquiring sanction from Department of Agriculture & Cooperation, Government of India.
- (xiv) NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club seeking Grants-in-aid from Government will be required to submit an application which includes all relevant information regarding the organization/institution such as Article of Association, bye-laws, Auditing Statements of Accounts, Sources, and Pattern of Income and Expenditure, etc.
- (xv) Organization applying for subsidy under Grants-in-aid must fulfill all the above terms and conditions.
- (xvi) Quality of products is to be maintained as stipulated in registration of bio-pesticides.
- (xvii) Organization must have obtained registration of bio-pesticides to be produced from CIB&RC as per Insecticides Act, 1968.
- (xviii) Technical persons employed or to be employed must be at least matriculate with experience in handling bio-control agents/bio-pesticides.
- (xix) Organization has to submit quarterly progress report in respect of production of bio-control agents/bio-pesticides to Directorate of PPQ&S for monitoring the progress.

- (xx) Organisation should be willing to provide trainings to farmers/NGOs/Women's Organizations etc on mass production of bio-agents/bio-pesticides where desired.
- (xxi) Organization has to maintain proper record in stock register of bio-agents/bio-pesticides produced and sold for auditing purpose.
- (xxii) Periodical technical audit of bio-control laboratory will be done by Central/State Governments in the appended format (**Appendix-VI**) to monitor the proper working of laboratory including maintenance of equipments.
- (xxiii) Government of India reserve the right to accept/reject any proposal submitted for release of Grants-in-aid without assigning any reason.
- (xxiv) As per DAC letter No. 20-15/2005-PP.I dated 27.12.2005, 15% of funds earmarked for Bio-labs will be allocated to NGOs headed by Woman.

Technical Audit and Physical Verification of Facilities

To ensure the proper working of Bio-labs, and physical verification of facilities (equipments, required accommodation, three-phase power wiring, electricity/water supply, etc.) announced audit of laboratories will be made by the Directorate of Plant Protection, Quarantine & Storage (PPQ&S) once in a year. This inspection will be made by two officers of Directorate of PPQ&S authorized by Plant Protection Adviser to the Government of India with prior intimation to concerned NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club. Authorised officers will inspect the working of laboratory in all respects and submit the report in prescribed format (**Appendix-V**). If the performance of laboratory is not found satisfactory, Plant Protection Adviser to the Government of India may recommend deregistration of NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club to the competent authority of concerned State/UT. During the audit check, the following record will be checked, hence, NGOs etc. concerned must maintain the proper record:-

- (i) Stock register of equipments purchased mentioning therein date of purchase and cost.
- (ii) Record of servicing of equipments.
- (iii) Stock register of bio-agents production and their utilization.
- (iv) Attendance register of employees engaged.
- (v) Record of trainings imparted to farmers/other organization.
- (vi) Audit statement of account etc.

Besides, announced audit, Directorate of PPQ&S, will also undertake un-announced audit check of the laboratory without prior intimation to the concerned NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club once in a year.

Furnishing of monthly/quarterly progress report

All the NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club who have established biocontrol laboratories under Grants-in-aid from Government of India require to submit monthly/quarterly progress report in the prescribed format (**Appendix-VII**) in favour of Plant Protection Adviser to the Government of India, Directorate of Plant Protection, Quarantine & Storage, N.H.-IV, Faridabad.

Assessment of Organisation

Every organization must have an organizational chart with clear job description. At a minimum level, organization should have its president/vice president who shall have the authority and resources to carry out assigned administrative as well as technical work for upkeep of various activities of the laboratory and is responsible for every act. The organization must have at least three officials trained in biocontrol agents/bio-pesticide production besides 2-3 helpers. Organisation must have valid registration number under Societies Act.

Appendix-I

Proforma for Grants-in-aid for setting up of biocontrol laboratories by the NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club under the Central Sector Plan Scheme “Strengthening & Modernization of Pest Management Approach in India

1.	Name of the Organisation	
2.	Whether registered under Societies Act, 1860 etc.	
3.	Registration No. and date	
4.	Names and addresses of the head of the organization and board of directors and their qualifications	
5.	Details of Grants-in-aid received by the organization during the last three years from this Ministry or any other Ministry and the status of its utilization.	
6.	Details of the activities conducted by the organization	
7.	Details of projects relating to agriculture undertaken by organization.	
8.	Project cost of the instant proposal (enclose a detailed Project Report also).	
9.	Address of the site where the said lab is to be established.	
10.	Whether copy of the registration certificate, article of association, bye-laws, audited statement of accounts for the past three years, source and pattern of income and expenditure enclosed.	

Signature of applicant

Appendix-II*List of Authorized Recommending Officers*

S.No.	Department/Institution	Name of the Officer
1.	Directorate of PPQ&S, N.H.-IV, Faridabad	Plant Protection Adviser to the Government of India; Director/Joint Director/Deputy Director/Assistant Director of IPM Division
2.	State Department of Agriculture/ Horticulture	Directors, Additional Directors, Joint Directors, District Agriculture/ Horticulture Officers.
3.	State Agricultural Universities (SAUs)	Director of Extension Heads of Departments of Entomology/Plant Pathology.
4.	Central Integrated Pest Management Centres (CIPMCs)	Officer Incharge of CIPMCs of respective States.
5.	National Bank of Agricultural and Rural Development (NABARD)	Branch Manager/Development Officer
6.	Krishi Vigyan Kendra	Officer Incharge

Recommendation of the authorized officer:

I, _____(Name), _____ (designation) of _____(name of authorized organization), hereby certify that I have personally inspected the site and I am satisfied that the _____ (the name of NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club) has got adequate building for establishing a biocontrol lab. I also certify that the Organisation is capable of undertaking the above project.

Signature & Seal of Recommending Authority

Appendix-IV**Requirement of Equipments for Establishment of Biocontrol Laboratories
by NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations,
Farmers Club**

S. No.	Equipment/Store	Number	Approx. Cost per Unit (In Rs.)	Total Amount (In Rs.)	Remarks
1.	Heat Convector	10	2000	20000	
2.	Air Conditioners with cooling and heating arrangements	4	30000	120000	
3.	Refrigerators 300 Ltr capacity	2	30000	60000	
4.	Hot Air Oven	2	40000	80000	
5.	BOD Incubators	2	80000	160000	
6.	Centrifuge	1	25000	25000	
7.	Laminar Flow Station	1	30000	30000	
8.	Autoclave Vertical	1	30000	30000	
9.	Steel Racks (7' x 3' x 18")	10	2000	20000	
10.	Corcyra cages (wooden)	100	500	50000	
11.	Chrysopa cages	10	500	5000	
12.	Laboratory Tables (2' x 8')	5	10000	50000	
13.	Laboratory Stools (Steel) Revolving	20	1000	20000	
14.	Hygrometers (dial type)	10	500	5000	
15.	Thermometer	10	400	4000	
16.	Mixer-cum-grinder	2	3000	6000	
17.	Corcyra egg laying cages	10	200	2000	
18.	U.V. Chamber with UV light	2	2500	5000	
19.	Exhaust fans	6	1000	6000	

20.	Vacuum Cleaners	2	7000	14000	
21.	Water Distillation Unit	2	5000	10000	
22.	Research Microscope	1	16000	16000	
23.	Stereo Binocular Microscope	1	70000	70000	
24.	Glasswares		80000	80000	
25.	Photocopier	1	60000	60000	
26.	P.C. with Accessories	2	50000	100000	
27.	Genset (Generator) 50 KVA	1	50000	50000	
28.	Top Loading Electronic Balance	1	70000	70000	
29.	Computer Tables with Chairs	2	6000	12000	
30.	PH Meter	1	7500	7500	
31.	Display Boards	5	1000	5000	
32.	Humidifier with Humidistat	4	10000	40000	
33.	Insects/diseased specimen display boxes	5	500	2500	
34.	Officer Table and Chair	1 each	13000	13000	
35.	Office Chairs with Arms	10	700	7000	
	Total			1255000	

Proforma for Inspection/Physical Verification of SBCLs/Bio-labs run by NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club

1.	Date of Inspection			
2.	Name and Address of Bio-lab to be inspected			
3.	Name of officers authorized by PPA for inspection			
4.	Name and contact No of Lab. Incharge			
5.	Details of staff deployed in laboratory			
S.No.	Name	Designation	Qualification & Training undertaken	Experience in the field
6.	List of equipments available in the lab and their working condition: (list to be attached)			
7.	Name and quantity of host insect being produced (as per stock register)			

Name of Host insect	Production (Nos)		Remarks			
	Monthly	Progressive				
8.	Name and quantity of bioagents being produced (as per stock register)					
Name of Bio-agent	Production		Remarks			
	Monthly	Progressive				
9.	If Producing biopesticides, their name and registration number from CIB&RC					
S.No.	Name of Bio-pesticide	Regn. No.	Production (Kgs)			
			Monthly	Progressive		
10.	Utilization of bioagents/biopesticides (as per Stock Register)					
Name of Bioagents/ Bio-pesticide	Quantity Released (Nos/ kgs)		Target pests	Crop on which released	Area covered by release (Ha)	
	Monthly	Progressive			Monthly	Progressive
11.	Balance quantity of bioagents/ biopesticides (Nos/ Wt in Kgs)					

12.	Whether monthly/quarterly progress report is being submitted to Directorate of PPQ&S, Faridabad? If not, reasons thereof?	
11.	Other activities being undertaken by the NGO etc.	
12.	Remarks of authorized officers	
13.	Name and signature of authorized officers	<p>1. _____</p> <p>2. _____</p>

Appendix-VI

Proforma for Technical Audit of SBCLs/Bio-labs run by NGOs, Private Entrepreneurs, Self Help Groups, Women Organisations, Farmers Club

1.	Date of Inspection			
2.	Name and Address of Bio-lab to be inspected			
3.	Name of officers authorized by PPA for inspection			
4.	Name and contact No of Lab. Incharge			
5.	Details of staff deployed in laboratory			
S.No.	Name	Designation	Qualification	Experience in the field
6.	List of equipments purchased, their physical presence and working condition: (list to be attached)			
7.	Name and quantity of host insect being produced (as per stock register)			
	Name of Host insect	Production (Nos)		Remarks
		Monthly	Progressive	
8.	Name and quantity of bioagents being produced (as per stock register)			
	Name of Bio-agent	Production		Remarks

	Monthly	Progressive				
9.	If Producing biopesticides, their name and registration number from CIB&RC					
S.No.	Name of Bio-pesticide	Regn. No.	Production (Kgs)			
			Monthly	Progressive		
10.	Utilization of bioagents/biopesticides (as per Stock Register)					
Name of Bioagents/ Bio-pesticide	Quantity Released (Nos/ kgs)		Target pests	Crop on which released	Area covered by release (Ha)	
	Monthly	Progressive			Monthly	Progressive
11.	Name of bio-agent/ biopesticides (as per Stock Register)		Effective shelf life (days)	Actual duration of storage (days) before release	Condition of storage (record of data logger)	
12.	Name of bio-agent/ biopesticides (as per Stock Register)		Quality control parameters* (standard)		Test report	
11.	Balance quantity of bioagents/ biopesticides (Nos/ Wt in Kgs)					
12.	Month-wise supply of consumables (use separate sheet if space is insufficient)					
13.	Maintenance of equipments/records (Give details thereof)					

14.	Whether monthly/quarterly progress report is being submitted to Directorate of PPQ&S, Faridabad? If not, reasons thereof?	
15.	Other activities being undertaken by the NGO etc.	
16.	Remarks of authorized officers	
17.	Name and signature of authorized officers	1. _____ 2. _____

- **Quality control Parameters**

Bioagents: Fecundity, longevity (M/F), percent parasitisation, length of flight, shelf life, sex ratio, rate of conversion from female to male at 32⁰C (for *Trichogramma*)

Bio-pesticides: NPV- Polyhedra Irregular/regular; size of polyhedra (0.71-2.21μ); virion (single/more); Virion size (60x400 nm); viral unit - POB/ml or gm (standard- 6x10⁹);Contaminants (*Salmonella*, *Shigella*, *Vibrio* must be absent)- should not exceed 1x10⁵ count per ml or gm; moisture content; pH; appearance

Appendix-VII

Monthly Progress Report for the Month of _____

in respect of M/s _____

Sl.No.	Name of Bio-agent/Bio-pesticides	Produced Unit cost (Nos./Kgs/LE s)	Utilized Target (2010-11) (Nos./Kgs/LE s)	2010-11	How utilized Target (2011-12)	Balance 2011-12	Total cost (Rs. lakh)
A	CAPACITY BUILDING						
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							

1	Sensitization Workshops (2 days)	Rs. 80,000 @ Rs. 2000/head	1	0.80	2	1.60	2.40
2	Apex Level Training (3 days)	Rs. 1.25 lakh @ Rs. 1500/head	1	1.25	2	2.50	3.75
3	Middle Level Extension Functionaries Trg. (7 days)	RS. 1.75 lakh @ Rs. 1000/head	5	8.75	15	17.50	26.25
4	For Trainer Farmers (5 days in field)	Rs. 1.75 lakh	5 States	8.75	2*5 States	17.50	26.25
5	Academic Staff Trg. (5 days)	Rs. 1.75 lakh	2	3.50	2	3.50	7.00
6	Curriculum Development Workshop (3 days)	Rs. 0.90 @ Rs. 1500/head	2	1.8	-	-	1.80
	SUB HEAD TOTAL			24.85		42.60	67.45
B	DATA VALIDATION – 10 CENTERS	Rs. 60,000/centre	One time 10 centers	1.80		4.20	6.00
C	AWARENESS CREATION						
1	Organizing Farm Schools	Rs. 58,300	5	2.92	20	8.75	11.67
2	Documentation/Publications etc.	Rs. 2 lakh/State	4 States	8.00	4 States	8.00	16.00
3	Training Material Development	Rs. 20,000/year	4 States	0.80	4 States	0.80	1.60
4	Publicity	Rs. 5 lakh/State	8 States	40.00	8 States	40.00	80.00
	SUB HEAD TOTAL			51.72		57.55	109.27
D	RODENT CONTROL CAMPAIGNS (only inputs)	Rs. 240 lakh/year	8 States	240.00	8 States	240.00	480.00
E	SUPPORT TO NODAL CENTER						
	Supporting staff to Nodal Centre (on hire basis)	Rs. 4 lakh/year		2.00		4.00	6.00
	Furnishing (Computers, LCDS etc.)	RS. 2 LAKH	ONE TIME	2.00		-	2.00
	Vehicle hiring for visits	Rs. 1500/day	60 days/yr.	0.90		0.90	1.80
	Recurring exp. (TA/DA etc.)	Rs. 3 lakh/year	60 days/yr	3.00		3.00	6.00

	Sty., Tel., Xeroxing etc.	Rs. 40,000/year	-	0.20		0.40	0.60
	Misc. expenses	Rs. 30,000/year	-	0.30		0.30	0.60
	SUB HEAD TOTAL			8.40		8.60	17.00
Total				326.77		352.95	679.72 (say, 680)

Equipment for State Pesticides Testing Laboratories**Annexe V**

S. No.	Name of Equipment	Cost (Rs. in lakh)
1	HPLC with UPS	16.00
2	GLC with UPS	10.00
3	FTIR with UPS	17.00
4	UV Visible Spectrophotometer	5.50
5	Electronic Balance	1.50
	Total	50.00

For 18 SPTLs (10 new and 8 constructed during 10th Plan, outlay proposed is Rs. 900 lakh)

AnnexeVI

Equipment for bio-pesticide testing for SPTLs/SBCLs

S. No.	Equipment	No.	Cost (Rs. In Lakh)
1.	ELISA (Enzyme-linked immune sorbent assay) complete unit	1	10.00
2.	Fluorescent Microscope with phase contrast attachment	1	08.00
3.	Miscellaneous items	--	02.00
	TOTAL	--	20.00

Considering one laboratory in each of 31 States, where laboratories exist, the amount of grant-in-aid calculates to Rs.620.00 (20.00 x 31) Lakh

Equipment for bio-pesticide testing for RPTLs and CIPMCs

S. No.	Equipment	No.	Cost (Rs. In Lakh)
1.	Laminar flow	1	01.00
2.	BOD Incubator	1	01.00
3.	Hot Air Oven	1	00.20
4.	Autoclave	1	00.40
5.	Moisture Analyzer	1	00.40
6.	Haemocytometer	1	00.40
7.	Aerosol Disinfector	1	00.20
8.	ELISA (Enzyme-linked immune sorbent assay) complete unit	1	10.00
9.	PCR (Polymerase Chain Reaction) Complete Unit	1	10.00
10.	Compound Microscope (Research)	1	02.00
11.	Fluorescent Microscope with phase contrast attachment	1	08.00
12.	Centrifuge (20,000 rpm)	1	01.00
13.	Micropipette (different range) 0.01 µl-1ml	--	01.00
14.	Miscellaneous items	--	01.00
	TOTAL	--	36.60

This set of equipments is required for 5 Regional CIPMCs and 2 RPTLs with an outlay of Rs. 256.20 lakh (=36.60x7).

Annexe VII

Component-wise Budget Outlay for “Strengthening & Modernization of Pest Management approach in India” for the 11th Five Year Plan (2007-2012)

S. No.		Rs. in lakh			
		IPM	Locust	IIA	Total
A	Recurring				
1.	Salaries	1719.38	**-	581.80	2301.18
2.	Wages	15.02	2.50	1.00	18.52
3.	OTA	5.04	0.20	6.60	11.84
4.	Medical Treatment	36.45	2.50	90.00	128.95
5.	DTE	310.79	30.00	43.40	384.19
6.	Foreign Travel Expenses	14.39	5.00	42.50	61.89
7.	Office Expenses	585.16	130.70	893.00	1608.86
8.	RRT	309.87	1.00	-	310.87
9.	Publication	16.00	2.00	-	18.00
10.	Other Administrative services	740.20	3.00	-	743.20
11.	Supply & material	29.83	75.00	150.00	254.83
12.	Advertisement & publicity	105.00	-	-	105.00
13.	Minor Work	41.00	16	-	57.00
14.	Professional services	29.11	1.50	140.00	170.61
15.	Additional Posts (salaries)	133.92	30.00	674.42	838.34
	Total A	4091.16	299.40	2622.72	7013.28
B	Non-Recurring				
1.	Machinery & Equipment	130.81	16.00	3439.20	3586.01
3.	Motor vehicles	17.02	87.00	20.00	124.02
4.	Contractual services	25.69	10.00	83.00	118.69
5.	Capital	700.00	250.00	200.00	1150.00
6.	Grant-in-aid	209.64	-	-	209.64
	NE Region	250.00	-	-	250.00
	Grant-in-aid (for SBCL) + Rodent Control + Bio-pesticides	985.00	-	620.00	1605.00

	Total B	2318.16	366.60	4362.20	7043.36
	Grant Total (A +B)	6409.32	662.40	6984.92	14056.64 *

* This includes an amount of Rs.450.00 lakh to be given as Grants-in-Aid

to the State for SPTLs in addition to Rs.1818.00 lakh provided under head 3.0031

**Salary for locust officials being given from non plan expenditure