

Directorate of Agriculture Development and Farmers' Welfare

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No:ADFW/3924/2021-TD-1

Date:03/06/2021

Circular

Sub:- Scheme on Crop Health Management – 2021-22– Working Instructions issued – reg.

Ref:- 1) G.O.(Rt).No717/17/AD, Thiruvananthapuram dated 21.07.2017

2) Order No.TP(2)12929/19 dated 16/5/2019

3)Order no. ADFW 482 /2020-TP2dt.8.6.2020

4) Order No. ADFW/3150/2021-TP(2) dated 23/04/2021

Government of Kerala, have accorded Administrative sanction for the implementation of the scheme 'Crop Health Management' as per reference 1st cited during the year 2017-2018 and Continuous Administrative sanction was accorded for implementation of the ongoing components of the scheme during the year 2019-20 vide reference 2nd cited and 2020-21 for continuing components vide reference 3rd cited.

As per reference no.4 there is a budget provision of Rs.770.00 lakh for the scheme 'Crop Health Management' under head of account **2401-00-107-78 (P)** for the financial year 2021-22. Out of this Continuous Administrative sanction was accorded for components worth **Rs.755.00 lakh (Rupees seven hundred fifty five lakh only)**.

Efforts to improve plant health have been evolving with increased understanding of plant ecology and pest management because in spite of success in controlling the crop pests, pesticides adversely affect public health and environment. Residues of pesticides in food crops are often been reported to exceed their acceptable limits. Many new pests which were controlled by their natural enemies present in the ecosystems have assumed the status of the major pests in some regions due to decline in the population of the natural enemies caused by the indiscriminate and excessive use of pesticides. Many interventions are aimed at supporting pest control often relying solely on the application of pesticides or the use of resistant/tolerant cultivars. In the long term this has been shown to be unsustainable as a result of pest overcoming host plant resistance and building up resistance to pesticides or the improper and or excessive use of pesticides with undesirable impact on human and ecosystem. The new approach of plant health management will bring together management towards sustainable ecosystems and people's health through Good Plant Protection Practices (GPPP). The Crop Health Management scheme is an attempt to fill the gaps for evolving sound crop health management strategies

and action plan.

The Scheme launched during 2013-14 will be continuing during 2021-22 also with an outlay of Rs.770.00 lakhs with the following components. Components worth **Rs.755 lakh** is continuing during 2021-22 also, the details of which are given below.

Components of scheme for 2021-22

Sl. No.	Components of scheme	Amount (Rs.in Lakhs)
(1)	Pest forecasting and advisory services	150.00
a)	Development of pests and disease surveillance system and advisories including use of GPS for pest and disease surveillance	100.00
b)	Establishment of new Plant Health Clinics at panchayath level (5 no) and strengthening of existing Plant Health Clinics.	50.00
(2)	Rodent control and Management of wild animal attack	75.00
a)	Rodent Control	25.00
b)	Management of wild animal attack in cropped areas through technology support.	50.00
(3)	Development of 9 Parasite Breeding Stations	25.00
(4)	Honorarium to District Plant Health Managers (DPHM) and Honorarium to Field Assistants (FAs)	500.00
(5)	Operational Expenses of KCPM	5.00
	TOTAL	755.00

(Rupees Seven Crores Fifty Five Lakh Only)

IVES:-

- Development of pests and disease surveillance system and advisories including use of GPS for pest and disease surveillance
- Development and use of pests and diseases diagnostic tool kit
- Rodent control measures
- Strengthening of existing Plant Health Clinics & district referral plant health clinics

- Establishment of new Plant Health Clinics
- Development of 9 Parasite Breeding Stations
- Management of wild animal attack in cropped areas through technology support.

The scheme will be implemented during 2021-22 with the following major components for an amount of Rs.755.00 lakhs.

(1) PEST FORECASTING AND ADVISORY SERVICES
(Rs.150 lakhs)

**(a) Development of Pests and Disease Surveillance System and
Advisories
including the use of GPS for pest and disease surveillance (Rs.100
lakhs)**

The pest surveillance activities will be implemented in all the 152 blocks, in 282 Krishi Bhavans where plant health clinics are functioning. In addition to the existing 282 clinics, Plant Health Clinics will be established in the newly selected 5 (five) Krishi Bhavans. List of Krishi Bhavans will be intimated later. Surveillance plots will be selected in all these 282 panchayaths (existing 282+ 5 new) @ 10 plots per panchayath based on cropping pattern covering paddy, vegetables, coconut, pepper and banana. The number of surveillance plots will be reduced based on cropping pattern of the selected panchayaths.

Activities envisaged under the component such as surveillance units, training, software development, technical materials, plant health clinics and referral laboratories, community empowerment, farmer field schools, weather database recording and compilation and plant health advisory services will be continued in existing 282 panchayaths and will be implemented in the newly selected 5 panchayaths .

Technical officers should visit the surveillance units on scheduled days. For paddy and vegetables weekly visit, for banana fortnightly visits and for coconut and pepper monthly visit are to be scheduled. The field assistants (pest scouts) should conduct the visit as per the schedule and record observations on pest/disease incidence. Observations should be noted in a register to be maintained at Krishi Bhavan level. The field level observations and data collected should be uploaded in the CPSS (Crop Pest Surveillance System) website through the GPS enabled hand held devices supplied for the purpose. Necessary support / training for uploading the data should be provided by the PGDPHM officers working in the block area. If needed, a district level training can be arranged for the officers in consultation with IITMK.

a.1 Assistance to surveillance Units (Panchayat) (Rs.28.70 lakhs)

Surveillance units will be established in 287 Panchayaths selected for the project during 2021-22 in farmer's field. The number of surveillance plots will be reduced based on cropping pattern of the selected panchayaths. Two plots each should be selected in the panchayath for the crops paddy, coconut, banana, pepper and vegetables if the area under these crops is above 5 ha. Plot size is 1 acre for rice & coconut, 50 cents for banana & pepper and 10 cents for vegetables. Thus total 10 plots can be selected in each panchayath and altogether 2870 plots can be selected from 287 panchayaths in 152 blocks of 14 districts. These 10 plots together will form the surveillance units in each panchayath. Farmers will be provided assistance @ Rs.1000/- per plot.

Observation and data collection

It should be ensured that the pest surveillance activities are undertaken as per schedule and under strict monitoring and evaluation by the district level officers. Technical officers should visit the surveillance units on scheduled days. For paddy and vegetables weekly visit, for banana fortnightly visit and for coconut and pepper monthly visits are to be conducted. The field assistants (pest scouts) should conduct visit as per schedule and record observations on pest/disease incidence. Observations are to be recorded in a Register which is maintained in the Krishibhavan. The field level observations and data collected should be uploaded in the CPSS (Crop Pest Surveillance System) website through the GPS enabled hand-held devices supplied for the purpose. Necessary support/training for uploading data should be provided by the PGDPHM officers working in the block area. A district level training can also be arranged in consultation with IITMK if necessary.

a.2 Soil testing(Rs.0.15 lakhs)

Fifty (50) soil samples should be collected from the newly selected surveillance plots from 5 panchayaths@10nos/panchayath based on which advisories are to be issued to farmers. Rs.300 can be expended for the analysis of each soil sample.

a.3 Internet charges for data uploading using hand held devices (Rs.12.096 lakhs)

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The Agricultural Officers and Agricultural Assistants in charge of Plant health Clinics will be provided hand held devices to enable data collection and providing advisories to farmers. For facilitating the uploading of data from field itself, net connection will be allowed for the devices and the net charges will be reimbursed based on actual utilization limiting to Rs.200/- per month to the Agricultural Officers and Agricultural Assistants of 282 Panchayaths where Plant Health Clinics are already established.

Amount will be allotted based on requirement.

a.4 Expenses for Rowing survey (Rs.12.12 lakhs)

In addition to fixed plot survey, rowing survey will be given emphasis covering all the hot spots of pests/ diseases in the block, based on the action plan and route-map finalized at block level. An amount of Rs.500/- per month can be expended for rowing survey to meet hire charges of vehicle based on actual expenses. The surveillance and rowing survey data will be analyzed and monthly reports at district level will be prepared with the help of District Plant Health Managers appointed on contract basis. For analyzing the data and preparation of district level reports, the service and technical support of PGDPHM officers should also be utilized.

a.5 Travelling expenses (Rs. 35 lakhs)

An amount of Rs.35 lakhs is earmarked under this component.

a.6 Printing and publishing Krishi Bhavan, block and district level advisories (Rs.10.00 lakhs)

An amount of **Rs.10.00 lakhs** is set apart for providing assistance to 282 plant health clinics for printing and publishing crop health advisories/ pest bulletins.

Crop health management advisories should be released **according to necessity** once in a month. It should be distributed to selected progressive farmers, farmer groups, clusters, Padasekhara Samithis, Panchayaths, Co-op-Societies, Agro Service Centres & other need based technology dissemination centres. Special attention should be given to deliver the material in good quality, both in terms of content and printing. Hard copies of the bulletins released should be submitted to the Directorate.

a.7 Other miscellaneous expenses (Rs.1.93 lakhs)

A Multi-Disciplinary District Team (MDDT) will be constituted with one specialist each from Entomology, Pathology & Soil Science, one representative from Krishi Vigyan Kendra, one representative from Research Station, Project Director ATMA & Deputy Director (E&T). MDDT proposed as a part of pest and disease surveillance could also be utilized for diagnostic services in Plant Health Clinics and development of advisories. The team will make need based field visit and recommend suitable remedial measures. It can be utilized to meet other miscellaneous expenses including expenditure in connection with field visit, group meetings etc. An amount of **Rs.1.93 lakhs** is allotted under this component.

(b) Establishment of new Plant Health Clinics at panchayath level (5 no) and strengthening of existing Plant Health Clinics. (Rs.50 lakhs)

b.1 Establishment of new 5 nos of Plant Health Clinics at panchayath

level (Rs.25 lakhs)

In addition to the 282 Plant Health Clinics already established in 152 blocks, it is proposed to establish 5 new Plant Health Clinics during 2021-22. Tentative constituency wise list of new Plant Health Clinics requested including name of panchayath and block is to be submitted at the earliest in consultation with Peoples representatives.

For establishing new clinics, an amount of **Rs.25.00 lakhs** is set apart @ Rs.5.0 lakhs per clinic. The guidelines issued vide Circular **No. TD(1)19742/14 dated 21/1/15** should be followed for smooth functioning of Plant health Clinics. The service of Field Assistants / Pest Scouts available under the scheme can be utilized for functioning of clinics. The charge of the clinic should be assigned to one Agricultural Assistant and he/she will assist the Agricultural Officer and will be responsible for functioning of the clinic in the absence of Agricultural Officer.

A sign board should be exhibited in front of the clinic for public awareness. The technical materials, equipment and components required for establishing a plant health clinic at the Panchayath level are shown below. Minor variations in the items and costs can be sanctioned by Principal Agricultural officers to suit local requirements within the ceiling limit of Rs.5.0 lakhs / clinic.

Materials and equipments required for plant clinics at Panchayat level

Items	Amount (in Rs)
Magnifiers	15000
pH Meter, salinity, EC box	10000
Insect showcase box, Hand lens	10000
Digital camera	15000
Tablet PC	10000
LCD projector and laptop	80000
Display board	100000
Exhibits	125000
Microscope	40000
Furniture	30000
Miscellaneous	30000
Books, periodicals and journals	20000
Portable PA system	15000
Total	500000

b.2 Strengthening of existing Plant Health Clinics (25 lakhs)

An amount of **Rs.25.00 lakhs** is set apart for providing additional support including infrastructure support and to meet critical gaps of existing plant health clinics and district referral clinics like maintenance cost, operational cost, charges for mobility etc. The amount will be allotted based on requirement

Component wise amount earmarked for implementation of Pest

forecasting and advisory services is shown below

SlNo	Activities	Units	Rate	Amount (Rs.in lakhs)	Remarks
(1)	Pest forecasting and advisory services- Rs.106.68583 lakhs				
a)	Development of pests and disease surveillance system and advisories including use of GPS for pest and disease surveillance				
a)1	Assistance to surveillance Units (Panchayat)	2870	1000/-	28.7	@10 plots/ panchayat for 287 KBs
a)2	Soil testing	50	300/-	0.15	Five KBs newly selected (10 Nos of units per KB)
a)3	Internet charges for data uploading using hand held devices	504 nos	200/- per month for 12 months	12.096	Reimburse the amount based on actual expenses limiting to Rs.200/- per month to AOs and AAs
a)4	Expenses for Rowing survey	282 units	500/- per month for 12 months	12.12	To meet hire charges of vehicles based on actual expenses
a)5	Travelling expenses	14 districts		35	
a)6	Printing and publishing Krishi Bhavan, block and district level advisories	282 units		10.00	
a)7	Other miscellaneous expenses (MDDT etc.)			1.93	
b)	Establishment of new Plant Health Clinics at panchayath level (5 no) and strengthening of existing Plant Health Clinics.				
b)1	Establishment of new Plant Health Clinics at	5 no	Rs.5 lakh/clinic	25.00	

	panchayath level				
b)2	Strengthening of existing Plant Health Clinics			25.00	
	TOTAL			Rs.150 lakhs	

2) RODENT CONTROL AND MANAGEMENT OF WILD ANIMAL ATTACK IN CROPPED AREAS THROUGH TECHNOLOGY SUPPORT (RS.75 LAKHS)

2)a Rodent Control (Rs.25.00 lakhs)

Rodent control campaign will be continued during 2021-22 also with a budget outlay of Rs. 25.00 Lakhs for conducting 100 campaigns. It should be conducted on a campaign mode covering the whole area (say panchayaths/ municipal wards etc.). Wide publicity should be given and rodent control campaign should be arranged with the involvement of all local self-government institutions, government and non-government institutions & agencies, people's representatives, public organizations, farmers' organizations etc. of the area. Rodent control campaigns will be conducted in the grama panchayath/municipalities and corporation identified as hotspots for major communicable diseases (including leptospirosis) by 'Ardrum Mission' of Acts Health Department.

An amount of Rs.25000/- is earmarked for each rodent control campaign, for the following activities.

Sl. No.	Items	Amount (Rs.)
1	Publicity charges	2000
2	Cost of rodenticides, baiting materials etc	23000
	Total (for one campaign)	25000
	Total (for 100 campaigns)	25.0 lakhs

2)b Management of Wild Animal Attack In Cropped Areas Through Technology Support (Rs.50 lakhs)

The farmers residing in the forest bordering areas are facing serious threats from wild animals. Presently elephants cause great amount of damage to field crops. Farmers use indigenous as well as technical methods to minimize the damages. Construction of trenches and electric fences is the common practice. But these methods are less effective. Bee hive fencing is a new method adopted to prevent the entry of elephants.

An amount of Rs.50.00 lakhs is set apart for providing assistance to install bee hive fencing system around gardens near forest areas susceptible to wild elephant attack with the technical support of ATMA, Wayand. Other successful local systems and practices prevalent for protection against wild animals and birds would also be assisted on a project mode. An amount of Rs.50.00 lakhs is earmarked for this purpose.

3. DEVELOPMENT OF NINE PARASITE BREEDING STATIONS (RS.25 LAKHS)

There are nine Parasite Breeding Stations in the State engaged in the production of parasitoids of coconut leaf eating caterpillar. These are located in the districts of Thiruvananthapuram, Kollam, Alappuzha, Kottayam, Ernakulam, Thrissur, Malappuram, Kozhikode Kasaragode. The activities of these nine Parasite Breeding Stations will be strengthened by developing them as stocking centres for bio control agents as well as through promoting parasite breeding during 2020-21.

The man power available at present in these stations is quite inadequate to enhance the activities. The present staff pattern comprises of only one technical assistant and one or two gardener cum lab cleaner. Hence the service of a technically qualified officer with B.Sc (Agri) and one labourer is proposed in these stations on contract basis with an honorarium of Rs.25000/- per month and Rs.8000/- per month respectively. **An amount of Rs. 25.00 lakhs** is set apart for providing the purchase of essential items and equipment for the production of bio control agents and other infrastructure development including renovation/ construction of building for the proper functioning of the PBS-and for providing honorarium to contract staff.

Financial allocation for nine Parasite Breeding Station are as follows

Sl.No	Parasite Breeding Station	Operational Support	Honorarium to contract staff	Total Amount in lakhs
1	PBS , Thiruvananthapuram	0.5	0	0.5
2	PBS, Kollam	0.5	3	3.5
3	PBS, Alapuzha	0.5	3	3.5
4	PBS, Kottayam	1	3	4
5	PBS,Ernakulam	0.5	3	3.5

6	PBS, Thrissur	0.5	3	3.5
7	PBS, Malapuram	0.5	1	1.5
8	PBS, Kozhikode	0.5	1	1.5
9	PBS, Kasargod	0.5	3	3.5
	TOTAL	5	20	25

4. HONORARIUM TO FIELD ASSISTANTS AND DISTRICT PLANT HEALTH MANAGERS - (Rs.500.00 lakhs)

Pest scouts working in the existing 282 Plant Health Clinics are to be paid honorarium@Rs.19,280/month and District Plant Health Managers posted in the districts and headquarters will be paid an honorarium of Rs.29,785/month as per G.O(Rt) No.34/2021/Agri dated 11/01/2021, Thiruvananthapuram.

The pest scouts should conduct fixed plot survey based on visit schedule and also rowing survey at regular intervals, in the remaining Krishi Bhavans of the block. In addition, 05 pest scouts are to be posted in the 05 plant health clinics to be newly started during 2021-22.

District Plant Health Managers posted in the districts and headquarters will be paid an honorarium of Rs.29,785/month. They will consolidate the progress reports of the scheme, do the documentation works and also give required technical support to the pest scouts.

An amount of Rs.500.00 lakhs is set apart for the purpose.

5) OPERATIONAL EXPENSES OF KERALA CENTRE FOR PEST MANAGEMENT, MONCOMBU, ALAPPUZHA.

An amount of Rs.5.00 lakh is earmarked for the operational expenses of KCPM.

FINANCIAL OUTLAY

The total financial outlay of the project is **Rs.755 lakhs (Rupees Seven Crores Fifty Five Lakh Only)** and the amount can be met from the provisions under the head of account **2401-00-107-78 (P) during 2021-22.**

IMPLEMENTATION OF THE PROJECT

The Deputy Director of Agriculture (E& T) should take a lead role in implementation of the scheme at district level. A minimum of one plant health Clinic should be visited by DDA (E & T) per month and detailed report to be submitted to this office. Monthly review meetings should be conducted to monitor the scheme. A minimum of 10 days field visit focusing on Plant Health clinics should be assigned to DPHM for which a visit schedule is to be prepared and it should be monitored by DDA (E & T).

Principal Agricultural officer will coordinate all the activities at the district level for the effective implementation of the project. Block and panchayat level physical and financial targets should be submitted soon after the receipt of the circular.

At the state level the Additional Director (CP) will be in charge of the project. The multi institutional project will be coordinated by Chief (Agriculture), State Planning Board.

An Expert Committee headed by Dr.C.K. Peethambaran, former Director of Research, KAU will guide the whole project on Plant health management. Dr.Nalina Kumari, former Professor of Entomology of KAU, Dr. Reghunath, former Professor of Entomology of KAU and Dr.Joseph, former Professor of Plant Pathology of KAU are members of the expert committee. Scheme components has to be implemented in Agro Ecological Units

REPORTING

Principal Agricultural officers should furnish monthly progress report to the Director of Agriculture on 5th of every month. Monthly progress report should contain component wise physical and financial targets and achievements, number of beneficiaries and stage of implementation of each component. Since Government is giving emphasis to women participation and gender budgeting, maximum efforts have to be made to include women beneficiaries in farmer participatory components of the scheme .The number of women beneficiaries and the amount utilized for such beneficiaries (component wise)should also be separately shown in the monthly progress report.

DR. K. VASUKI IAS
DIRECTOR
Director of Agriculture

To 1)
All Principal Agricultural Officers and Project Directors, ATMA
Director, SAMETI
Project Director, KCPM, Moncompu
Director General, NIPHM, Hyderabad
Director, IITM-K

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