

TS(2)15444/19.

Directorate of Agricultural Development and  
Farmers Welfare, Vikas Bhavan

Dated: 28 /5/2019

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### CIRCULAR

Sub: Scheme on Development of Spices – 2019-20– Working instruction for implementation - orders issued .

Ref : 1) GO.(Rt)781/2017/ADdated 04.08.2017

2) Order NoTP(2)7454/18 dated 26/06/2018 of Director of Agriculture

3)Order No TP(2)12925/2019 dated 16/05/19 of Director of Agriculture

As per the order referred 1<sup>st</sup> Government of Kerala accorded Administrative sanction for Rs.1000 lakhs for the implementation of scheme “**Development of Spices**” during 2017-18 and as per the annual plan 2018-19 the scheme continued during the financial year 2018-19with a budget allocation of Rs.900 lakhs under the H/ac 2401-00-108-59 Plan.

In the Annual Plan 2019-20 also, the scheme is proposed to be continued with a budget allocation of Rs.1000 lakhs. Out of this an amount of Rs.38.74416 lakhs was allotted for encashment of “Q” bill of 2018-19 and Administrative Sanction for 2019-20 is accorded only for Rs.946.25584 lakhs for 4 major components.

Spice crops account for a predominant position in the agricultural economy of the state. Kerala holds a supreme position in the production of pepper. Tellicherry Garbled Extra Bold (TGEB) pepper, Cochin ginger (low fibre content), Alleppey Finger Turmeric (AFT), Alleppey Green Extra Bold (AGEB) Cardamom were internationally accepted varieties from Kerala. On the production side low yield, damage to standards, crop loss due to pests and diseases, post-harvest losses and fluctuating prices are causing decline in area and production of spices in the State. Revival of production of spices is essential to improve the livelihood of people as well as to improve foreign exchange earnings. Apart from foreign exchange earnings, organic spices as well as value added spices are assuming significance. Hence this scheme launched during 2012-13 is being continued during 2019-20 also with a budget allocation of Rs.1000 lakhs under H/ac 2401-00-108-59 Plan.

#### **Objectives**

The main objectives of the scheme are:-

- To increase the area of spices particularly pepper, ginger, turmeric, nutmeg and clove by using high yielding and improved varieties.
- Productivity improvement of pepper in Idukki district.
- Assist the farmers in technology adoption for higher production.
- Production of good quality planting materials of high yielding varieties of pepper through decentralised nurseries.
- Popularize location specific HYV developed by farmers.
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The main components of the scheme are

### I. Establishment of Decentralized pepper nurseries. (3 lakhs)

One of the major problems faced by the pepper farmers is the non-availability of good quality rooted pepper cuttings. Improved varieties play a significant role in augmenting the yields in any production programme. Effect of inputs applied and good practices followed can be fully realized only with the adoption of improved varieties. To achieve this, good quality planting material has to be made available to pepper farmers. Small scale nurseries with production capacity of 0.5 lakh cuttings per nursery per year can be operated through SHGs, Women Groups, Unemployed youths etc. with technical support from Department of Agriculture, Kerala Agricultural University and Research institutions, Central Government institutions, KVKs etc.

During 2019-20, a total of **10 Nos** of de-centralized nurseries will be established with an assistance @of **Rs.30000 per nursery**. An amount of **Rs.3 lakhs** is set apart for this purpose.

Sl.No	District	No.of nurseries	Targetted production of pepper cuttings (Lakh Nos.)	Assistance @ ₹30000/nursery (Amount in lakhs)
1	Thiruvanthapuram	1	0.5	0.3
2	Pathanamthitta	1	0.5	0.3
3	Idukki	1	0.5	0.3
4	Ernakulam	1	0.5	0.3
5	Thrissur	1	0.5	0.3
6	Malappuram	1	0.5	0.3
7	Kozhikode	1	0.5	0.3
8	Wayanad	1	0.5	0.3
9	Kannur	1	0.5	0.3
10	Kasaragod	1	0.5	0.3
	<b>Total</b>	<b>10</b>	<b>5</b>	<b>3</b>

### II. Area Expansion of spice crops (Rs.193.25584 lakhs)

#### a) Pepper (Rs.175 lakhs)

Establishment of new pepper garden with high yielding varieties of pepper can be undertaken for improving the productivity of pepper. The estimated cost for the establishment of one ha of pepper garden is Rs.40000/-. An amount of Rs.20000/- (limited to 50% of the total cost) is given as subsidy. During the year 2019-20 total area of **875 ha** is proposed to be brought under cultivation with improved varieties of pepper

*An amount of Rs.175.00 lakhs is set apart for this purpose.*

The planting materials required for new planting can be utilised from the Departmental farms, Kerala Agricultural University, Central Government Institutions, Progressive farmers and other approved nurseries.

The rooted pepper cuttings produced in Department farms during 2019-20 will be supplied to selected districts based on availability. The Principal Agricultural Officers concerned should make necessary arrangements for lifting and distribution of pepper cuttings to krishibhavans immediately. Farm section of the Directorate will issue the statement for allocation of pepper cuttings of departmental farms. If the cuttings from farms are not sufficient, cuttings from approved decentralised nurseries can be arranged at district level. The cost of cuttings from department farms / decentralised nurseries can be adjusted from the scheme provision and the balance amount to be paid to beneficiaries through e-payment.

#### **b. Ginger / Turmeric (Rs.17 lakhs)**

The main objective is to increase the area of Ginger and turmeric using high yielding and improved varieties, productivity improvement of organic ginger and turmeric and to assist farmers in technology adoption for higher production. The cultivation of ginger and turmeric with high yielding varieties adopting scientific cultural practices will be undertaken for increasing production and productivity.

As far as possible the scheme will be implemented in a compact area on cluster basis so as to supervise the programme effectively. In the case of Ginger and Turmeric the assistance will be 50% of the cost of inputs limited to Rs.12500/- per ha. Assistance will be given for inputs i.e. for lime, compost/ farm yard manure, wood ash, bio fertilisers and bio control agents. **136 Ha** will be covered during 2019-20 and an amount of **Rs.17 lakhs** is set apart for this component.

#### **b) Nutmeg/ Clove (Rs.1.25584 lakhs)**

The area expansion programme is aimed to promote cultivation of the locally adapted and improved varieties of nutmeg / Clove. The financial assistance will be extended to farmers for **area expansion of nutmeg/ clove** using high quality planting materials and to meet cost of inputs for adopting INM/ IPM.

The assistance will be 50% of the cost of inputs limited to Rs.20000/- per Ha for meeting the expenditure on planting material and cost of inputs for INM/ IPDM and other agricultural operations required for the management of crop. An area of **6.3 Ha** will be covered during 2019-20 and an amount of **Rs.1.25584 lakhs** is set apart for this component.

An important problem in nutmeg cultivation is the segregation of seedlings into male and female plants resulting in about 50% unproductive male trees. The only alternative is to adopt vegetative propagation using budded or grafted plants. An ideal plantation should have male and female trees in the ratio 1:10.

**Abstract of Area Expansion of Spices**

Sl No.	Name of spice crop	Physical target (in Ha)	Rate of assistance	Total financial assistance( in lakhs)
1	Pepper	875	50% assistance limited to Rs.20000 per Ha	175
2	Ginger/Turmeric	136	50% assistance limited to Rs.12500 per Ha	17
3	Nutmeg/Clove	6.3	50% assistance limited to Rs.20000per Ha	1.25584
	<b>Total</b>	<b>1017.3 ha</b>		<b>193.25584</b>

**Districtwise targets for area expansion of spice crops are given below**

Sl. No	Districts	Pepper @20,000/ha		Ginger/turmeric @12,500/ha		Nutmeg/clove @20,000/ha		Total amount allotted (Rs. in lakhs)
		Area(Ha)	Amount (lakhs)	Area (Ha)	Amount (lakhs)	Area( Ha)	Amount (lakhs)	
1	Thiruvanthapuram	40	8	5	0.625	-	-	8.625
2	Kollam	80	16	10	1.25	-	-	17.25
3	Pathanamthitta	40	8	5	0.625	0.5	0.1	8.725
4	Alappuzha	40	8	2	0.25	-	-	8.25
5	Kottayam	80	16	10	1.25	2	0.35584	17.60584
6	Idukki	-	-	19	2.375	2	0.4	2.775
7	Ernakulam	85	17	10	1.25	1	0.2	18.45

8	Thrissur	55	11	5	0.625	1	0.2	11.825
9	Palakkad	80	16	10	1.25	-	-	17.25
10	Malappuram	85	17	10	1.25	-	-	18.25
11	Kozhikode	85	17	10	1.25	-	-	18.25
12	Wayanad	-	-	30	3.75	-	-	3.75
13	Kannur	135	27	5	0.625	-	-	27.625
14	Kasaragod	70	14	5	0.625	-	-	14.625
	<b>TOTAL</b>	<b>875ha</b>	<b>175</b>	<b>136ha</b>	<b>17</b>	<b>6.5ha</b>	<b>1.25584</b>	<b>193.25584</b>

The farmers can purchase high quality planting materials from the departmental farms, central and state research institutions, Kerala Agricultural University and from other approved nurseries or progressive farmers. The quality of the planting materials should be ensured if it is made available through approved nurseries or progressive farmers.

### III. Revitalization and rejuvenation of Pepper garden (Rs.250 lakhs)

Revitalization involves gap filling with new pepper vines, replacing damaged standards, carrying out fertilizer/manure and lime application and plant protection measures with the aim of rejuvenating unproductive and neglected pepper gardens. Financial Assistance of 50% of total cost limited to 10000/ha will be given during 2019-20 for the maintenance of gardens covering an area of **2500 ha** for carrying out these activities. For Wayanad district assistance will be provided under Wayanad package.

Farmers will be provided assistance for inputs i.e. for planting materials, lime, farm yard manure/ compost, plant protection chemicals and bio control agents. An amount of **Rs.250 lakhs** is set apart for giving assistance during 2019-20.

Districtwise targets for area expansion of spice crops are given below

Sl.No	District	Area in ha	Assistance proposed@ 10,000/ha (₹ lakhs)
1	Thiruvanthapuram	60	6
2	Kollam	100	10
3	Alappuzha	80	8
4	Pathanamthitta	50	5
5	Kottayam	140	14
6	Idukki	1400	140
7	Ernakulam	100	10
8	Thrissur	70	7
9	Palakkad	100	10
10	Malappuram	100	10
11	Kozhikode	100	10
12	Kannur	100	10
13	Kasaragod	100	10
	<b>TOTAL</b>	<b>2500ha</b>	<b>250Lakhs</b>

#### IV. Integrated Pepper Development in Idukki (500 lakhs)

Pepper is one of the major spice crops of Kerala. Idukki ranks first both in terms of area and production of Pepper in Kerala covering an area of 42694 Ha as on 2015-16. The scheme of Integrated Pepper development aims at restructuring pepper development activities in Idukki for augmenting production and productivity which can be replicated throughout the state.

## Objectives

1. To increase production and productivity of pepper.
2. To increase and popularize high yielding planting materials with latest technology.
3. To ensure local availability of quality planting materials by promoting local nurseries.
4. To utilize latest technology in the production of planting materials with high vigour and yield potential.
5. To rejuvenate pepper plantations through proper crop health management.
6. To create model plots adopting latest technology so that farmers get first hand awareness of technology, this will enhance the rate of adoption.

## Project Area

The activities are proposed to be implemented in the entire 53 Gramapanchayaths of Idukki district.

## Approach

Cluster approach is proposed in implementing the scheme which will increase efficiency of agricultural practices, instil confidence in the members of the group, ensure adoption of technology and reduce the management cost of gardens as a whole.

## Components of the programme

1. Area Expansion of pepper
2. Support for on farm production units of Trichoderma/VAM
3. Demonstration of farmer developed varieties
4. Support to secondary and micro nutrient application
5. Support to soil ameliorants application.
6. Prophylactic spraying through Agro Service Centres against Quick Wilt disease.
7. Revitalization of pepper samities
8. Operational expenses
9. Travelling expences.

### 1. Area Expansion of Pepper (250 lakhs)

Establishment of new pepper garden with high yielding varieties of pepper can be undertaken for improving the productivity of pepper. The estimated cost for the establishment of one ha of pepper garden is Rs.40000/- . An amount of Rs.20000/- (limited to 50% of the total cost) is given as subsidy. During the year 2019-20 total area of **1250 ha** is proposed to be brought under cultivation with improved varieties of pepper in Idukki district. *An amount of Rs.250.00 lakhs is set apart for this purpose.*

**2. Demonstration of farmer developed varieties (1 lakhs)**

There are around 75 no. of pepper varieties in cultivation now. This include both indigenous/local varieties like Aimpiriyam, Kottanandan, Vellamunda and high yielding varieties like Panniyoor series developed in research stations. There are farmer developed varieties also like Aswathy, Suvarna and Pepper Thekken which have special qualities like resistance to particular disease, specific morphological characters (like more number of berries/spike) which give higher yield etc. Such varieties can be made popular among cultivators through establishing their Demonstration plots. Farmers can visit these plots and get first-hand information on the superior qualities of the variety concerned. This will also be an encouragement and recognition to the farmer who developed it.

*It is proposed to give assistance @Rs.10, 000/- to establish a demonstration plot of 0.1 Ha. 10 such plots are proposed for which Rs.1.00 lakhs is set apart.*

**3. Support to secondary and micro-nutrients cost of inputs and collection of soil samples, transportation etc. (5 lakhs)**

Secondary and micronutrients play an important role in crop yield and quality particularly if the soil is deficient in Calcium, Magnesium, Sulphur, Zinc, iron etc.

*An assistance of Rs.500/ha is given towards expenses involved like cost of nutrients and an area of 1000 Ha will be covered during 2019-20 for which Rs.4.5 lakhs is set apart. An amount of Rs.0.5 lakhs is also set apart for soil sample collection, transportation analysis etc.*

**4. Support to soil ameliorants (54 lakhs)**

It is proposed to cover 1000 ha under this component to correct soil acidity.

*An assistance of Rs.5400/ha will be given as assistance towards expenses involved like cost of soil ameliorant, its application costs etc. A total amount of Rs. 54 lakhs is set apart for this component.*

**5. Prophylatic spraying through Agro Service Centres against Quick Wilt disease. (Rs.175 lakhs)**

Quick wilt, which is a fungal disease, is one of the main reasons for inflicting heavy losses in the pepper production in the traditional pepper producing areas. The fungus attacks both the root system as well as the aerial parts of the pepper plant. The attack on the root system causes complete damage of the plant within months. Control against this disease is achieved by 1% Bordeaux mixture/0.2% Copper oxy chloride or soil trenching with the same @3-5 lts per plant base.

The assistance for adopting integrated disease management practices including cost of lime, Copper sulphate, copper oxy chloride, bio control agents like Trichoderma and Pseudomonas and application charges (labour) will be given subject to a maximum of Rs. 10000/- per hectare. The total area to be covered is **1750 ha** and the total financial allocation



is **Rs.175 lakhs**. Biocontrol agents for this purpose should be purchased from State Biocontrol Lab, Mannuthy.

The scheme should be implemented on a campaign mode in the affected area by Krishi bhavans including the farmers, pepper samithies, Agro service centers, KVK, Kerala Agricultural University, LSGs etc. Necessary steps would be taken from the part of the department to assure the supply of the required inputs for carrying out the spraying operations. The trichoderma and pseudomonas should be made available preferably from the State Biocontrol Lab Mannuthy , Kerala Agricultural University and KVKs.

#### **6.Revitalisation of Pepper samithies (11 lakhs)**

An amount of **Rs.11.00 lakhs** is set apart for revitalisation of **44 samithies** providing assistance @ **0.25 lakhs/samithy** .The assistance is proposed to be utilised for carrying out basic functions like registration, maintenance of records, for meeting expenses in organising meetings, arranging inputs, setting up of bio pharmacy etc. Expenditure for activities related to organic farming can also be met from this provision.

#### **7. Operational Expenses including transportation (2 lakhs)**

For effective implementation of the project, operational expenses will be paid for meeting fuel charges of vehicle, training expenses, review meeting, documentation etc . **An amount of Rs.2 lakhs is set apart for the purpose.**

#### **8. Travelling Expenses (2 lakhs)**

Idukki district has 8 blocks with headquarters at Thodupuzha. For implementing this scheme, extensive field visits are to be conducted for proper supervision and farmers training to be organised for extensive use of bio control agents for Integrated Pest and Disease Management (IPDM). Hence provision for meeting travel expenses of field staff, Agricultural Officers, Assistant Directors of Agriculture and supervising officers is essential for the effective implementation of the scheme. **An amount of Rs.2.00 lakhs is set apart for the purpose.**

#### **Components of Integrated Pepper Development in Idukki**

Sl. No.	Component	No. of units	Unit cost (Rs.)	Total amount required (Rs.in lakhs)
a	Area expansion of pepper	1250ha	20000/Ha	250.00
b	Demonstration of farmer developed varieties	10 plots of unit size of 0.1 ha	10000/ha	1.00

c	Support to secondary and micro nutrients			
	a. Cost of inputs	1000 ha	500/Ha	4.50
	b. Collection of soil samples, transportation, etc.			0.50
d	Support to soil ameliorants	1000ha	5400/Ha	54.00
e	Prophylatic spraying through Agro Service Centres against Quik Wilt disease.	1750/ ha	10000/ha	175
f	Revitalization of pepper samities	44 samithies	25000/Samithy	11.0
g	Operational expenses			2.0
h	Travelling Expenses			2.0
	<b>Total</b>			<b>500.00</b>

An expert committee with the following persons is constituted for overseeing and guiding the implementation of Integrated Pepper Development in Idukki District and also to ensure quality of the planting material inputs used.

1. Dr.J.Thomas, Director (Rtd) of ICRI, Spices Board
2. Dr. P.J. Joseph, Former Professor of Plant Pathology, Kerala Agricultural University
3. Experts from KVK, Idukki and ICRI, Idukki

### Financial Outlay

The amount of **Rs.1000.00 lakhs** required for the implementation of the components of this programme can be met from budget provision for the Development of Spices under the head of account **2401-00-108-59 Plan**. Administrative sanction is accorded for Rs.946.25584 lakhs and the working instruction for balance provision of **Rs.15 Lakhs** under the above head of account will be issued after obtaining administrative sanction for the component.

### Abstract of the scheme

Sl. No.	Component	No. of units/ Ha	Unit cost (Rs.)	Total amount required (Rs.in lakhs)
<b>I</b>	<b>Establishment of Decentralised Pepper nurseries</b>	10 nos	30000/- per unit	3
<b>II</b>	<b>Area Expansion of Spice Crops</b>			
	a. Pepper	875	20000/- per Ha	175
	b. Ginger / Turmeric	136	12500 /- per Ha	17
	c. Nutmeg/ Clove	6.3	20000/- per Ha	1.25584
	<b>Sub - Total</b>			<b>193.25584</b>

III	Revitalization and rejuvenation of Pepper garden	2500 Ha	10,000/- per Ha	250
IV	<b>Integrated Pepper Development in Idukki</b>			
a	Area expansion of pepper	1250	20000/Ha	250.00
b	Demonstration of farmer developed varieties	10 plots of 0.1 ha	10000/ha	1.00
c	Support to secondary and micro nutrients			
	a. Cost of inputs	1000 ha	500/Ha	4.50
	b. Collection of soil samples, transportation, etc.			0.50
d	Support to soil ameliorants	1000	5400/Ha	54.00
e	Prophylatic spraying through Agro Service Centres against Quik Wilt disease.	1750/ ha	10000/ha	175
f	Revitalization of pepper samities	44 no.s	25000/Samithi	11.0
g	Operational expenses			2.0
h	Travelling Expenses			2.0
	<b>Total (IV)</b>			<b>500.00</b>
	<b>GRAND TOTAL</b>			<b>946.25584</b>

### Mode of implementation

The scheme will be implemented through the Krishibhavans of the selected districts. Wide publicity should be given through mass media. At block level, Assistant Director of Agriculture will co-ordinate and supervise the programme. At the district level, the Deputy Director of Agriculture (H) will be the nodal officer and at the state level, Additional Director of Agriculture (CP) will monitor the programme.

All the assistance to the farmers should be credited to the bank account of the concerned beneficiaries through e -payment.

Principal Agricultural Officers are hereby directed to keep utmost vigil in implementing the scheme and achieve the targets in full. Any wilful lapse on the part of any officers in implementing the scheme will be viewed seriously and disciplinary action will be initiated against the officers who are responsible for the lapses and action will be taken to recover the losses.

The monthly progress report in the prescribed proforma should reach this office on or before 5th of every succeeding month in the name cover of Additional Director of Agriculture (CP). Monthly progress report should invariably contain component wise physical and financial targets and achievements, number of beneficiaries and the 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

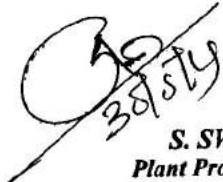
beneficiaries in the scheme. The number of women beneficiaries and the amount utilised for such beneficiaries (component wise) should also be shown separately in the monthly progress report.

  
Director of Agriculture

To  
All Principal Agricultural Officers

**Copy to**

1. CA to Director of Agriculture
2. CA to all Additional Directors of Agriculture
3. All Joint Directors of Agriculture at HQ / Senior Finance Officer
4. Planning section for allotment of funds
5. SW Section
6. Finance section
7. TH section for distribution allocation of pepper cuttings of Departmental farms
8. IT Cell for publishing in web site

  
**S. SWARNAVI**  
**Plant Protection Officer**  
**Agriculture Development and**  
**Farmers Welfare Directorate**  
**Vikas Bhavan, Typm-33**