

**CIRCULAR**

Sub: Annual Plan 2020-21 - Scheme on Soil Health Management and Productivity Improvement - 'Soil Ameliorants in Selected Districts' -working instructions- reg

- Ref: 1. G.O (Rt) No. 251/2019/ AGRI dated 08.03.2020  
2. G.O (Rt) No. 393/2019/ AGRI dated 22.04.2020  
3. Order No ADFW/587/2020-TP-2 dated 08-06-2020 of Director of Agriculture

As per the reference 1st cited, Government have accorded sanction for the inclusion of the component 'Soil Ameliorants in Selected Districts' under the scheme "Soil and Root Health Management and Productivity Improvement" in the Green Book for implementation during the year 2019-20 at a cost of Rs. 2491 lakh from the total outlay set apart for " Soil and Root Health Management and Productivity Improvement" scheme under the Head of Account 2401-00-800-28 (Plan).

As per the reference 3rd cited, Administrative Sanction was accorded for the component 'Soil Ameliorants in Selected Districts' under the scheme "Soil and Root Health Management and Productivity Improvement" which is included in the Green Book for implementation during the year 2020-21 at a cost of Rs. 1243.96601 lakh from the total outlay set apart for " Soil and Root Health Management and Productivity Improvement" scheme under the Head of Account 2401-00-800-28 (Plan).

Soil is the basis of farming activity. Soil health is the basic factor for optimising crop productivity. Soil acidity is a major issue in Kerala soils and about 90% of the soil are acidic with over 50% strongly to extremely acidic. Application of soil ameliorants and nutrients based on soil testing, help in augmenting crop production. One of the detrimental effects caused by the recent floods in farming sector is the multiple damages to soil, both in wetlands and garden lands. Heavy flow of water has eroded the fertile top soil, landslips/landslides has changed the topography of large extent of area, flood water which remained stagnant in the field has deposited sand and silt over the top soil, changing the soil structure and texture, blocked soil aeration, altogether making once fertile cultivable lands unfit for cultivation. Soil became more acidic due to these reasons. Correcting soil acidity is very much essential in this condition. Since

soil acidity is a major issue in Kerala soils. amelioration of soil has to be given top priority and this component is included as a systematic intervention in correcting soil acidity to improve soil fertility status.

**Objectives:**

1. To correct the soil acidity (pH) and improve the soil fertility status and thereby the crop productivity.
2. To improve the intake of primary, secondary and micro- nutrients by the crops by improving soil health status.
3. To sustain good soil health through improved agricultural practices.

**Programme:**

Based on the soil test data, as per general recommendation, lime @ 600 Kg/ ha could be applied to paddy crop. More quantity of lime as per soil test data, if required, can be applied by farmers at their own cost. As per the scheme, the rate of assistance for purchase and application of soil ameliorants like dolomite/ lime for one ha of paddy will be maximum of 75% of the total cost limited to Rs. 5400/- per ha. An amount of Rs.2475.90 lakh is set apart for the subsidy of liming materials for an area of 45850 ha and an amount of Rs. 15.10 lakh is set apart for transportation and handling charges.

The liming material like Dolomite/ Lime/ powdered lime stone @ 600 Kg/ha should be arranged in the Primary Agricultural Co-op Banks/ Societies and supplied to the farmers delinking the e- payment system. Since the Government, as per reference 3rd cited, have accorded sanction for inclusion of Kainakary Limeshell Co-operative Society Ltd. No. 2065 also for stocking and distribution of lime, they may also be considered. Tender or quotations should be invited observing Stores Purchase Rules for arrangement of the materials at the Co-operative Societies/ Co-operative Banks. The Agricultural Officer will test the liming materials and quality materials alone will be distributed. This should be ensured by the Principal Agricultural Officer and Deputy Director of Agriculture (WM).

**Neutralising value (Calcium carbonate equivalent ) of liming materials**

Liming materials differ markedly in their ability to neutralise soil acidity. The effectiveness or efficiency of liming material is expressed as Calcium carbonate equivalent or neutralising value. Pure calcium carbonate is taken as the standard with a value of 100 percent. The neutralising value of common liming materials is given in Table below. The values mentioned

are for pure materials and will change depending on the material. The highest neutralising value for Calcium oxide is indicative of its superiority over other liming materials in terms of efficiency to neutralise acidity.

Table. Calcium carbonate equivalent of pure forms of liming materials

Liming materials	Neutralizing value(%)
Calcium Oxide	179
Calcium hydroxide	136
Magnesium Carbonate	109
Dolomite (Calcium Magnesium Carbonate)	109
Calcium Carbonate	100
Calcium Silicate	86

(Source: Outcome of Soil Based Plant Nutrient Management Plan for Agro Eco systems of Kerala)

In the case of dolomite, materials of different quality and different price tags are available in the local market. To ensure supply of quality materials to the farmers at fair prices, it is absolutely necessary to enforce standards already fixed by the Bureau of Indian Standards (BIS).

#### **Pricing:**

The neutralizing value requirement (minimum) for dolomite is 70% and this shall be taken as the basis for fixing maximum price. Materials with neutralising value less than 60% shall be rejected. Price of materials with NV in between may be fixed using the following formula:

$$\text{Price (calculated)} = A \times B \div 70$$

where, A = market price, B = NV as per analytical report

For example, Sample with NV 65 % and market price for standard material is Rs. 4.50 per Kg, the price for the sample can be calculated as follows:

$$\text{Price} = 4.5 \times 65 \div 70 = \text{Rs. } 4.17 \text{ ps.}$$

This scheme will be implemented in an area of hectares covering all districts of Kerala. The farmers who avail any assistance from any other scheme for the same purpose will not be considered for subsidy under this scheme.

#### **Mode of Implementation:**

The field level implementation will be done by the Agricultural Officers of the concerned Krishi Bhavans. The quality of soil ameliorants should be ensured before distribution. The

required soil ameliorants will be stocked and distributed to Padasekhara Samithies/ farmers as per the permits issued by the Agricultural Officers of the concerned Krishi Bhavans. The subsidy amount will be issued to the concerned Co-operative Societies/ Co-operative Banks who distribute the soil ameliorants, after the completion of the distribution.

The scheme will be implemented by the Deputy Directors of Agriculture (WM) at the District level and the Assistant Director of Agriculture at Block level. Since the Government is giving emphasis to women participation and gender budgeting, maximum efforts should be made to include women beneficiaries in the scheme. The number of beneficiaries and the amount utilized for such beneficiaries (component wise) should also be separately shown in the monthly progress report

**Timeline for implementation:**

Period	Progress (%)
April- June	45
April- september	75
April- December	100
April-March	

**Monitoring:**

Additional Director of Agriculture (CP) will be in charge of the programme at the State level. A State level committee under the chairmanship of the Additional Director of Agriculture (CP) and Joint Director of Agriculture (WM), Joint Director of Agriculture (VC) & Deputy Director of Agriculture (CD) as members will monitor the distribution of lime to farmers. The Principal Agricultural Officers will monitor and co-ordinate the programme at the district level. A district level committee under the chairmanship of the Principal Agricultural Officer and Deputy Director of Agriculture (WM) & Assistant Director of Agriculture of the concerned block as members will monitor the distribution of lime to farmers. Monthly physical and financial progress report should be furnished to the Director of Agriculture by the 5<sup>th</sup> of every month.

**Financial Outlay:**

The financial outlay for this programme is Rs. 2491 lakh. The rate of assistance for purchase and application of soil ameliorants like dolomite/ lime for one ha of paddy will be

maximum of 75 % of the total cost limited to Rs. 5400/- per hectare. Transportation and handling charges can be given to Padasekhara Samithies etc.

Sl.No.	Item	Area (Ha)	Subsidy per ha (Rs)	Total Assistance (Rs. Lakh)
1	Liming materials	22851.2224	5400	1233.96601
2	Transportation and handling charges			10
	<b>Total</b>	<b>22851.2224</b>		<b>1243.96601</b>

The physical and financial target allotted is as follows:

Sl. No.	Name of District	Area in Ha	Financial (Rs. in lakh)		
			Subsidy for liming material	Transportation and handling charges	Total
1	Thiruvananthapuram	340	18.36	0.1716	18.5316
2	Kollam	175	9.45	0.0858	9.5358
3	Pathanamthitta	975	52.65	0.3894	53.0394
4	Alappuzha	5014.22	270.76788	2.21349	272.98137
5	Kottayam	2000	108	0.9768	108.9768
6	Idukki	175	9.45	0.0792	9.5292
7	Ernakulam	800	43.2	0.4686	43.6686
8	Thrissur	5000	270	2.30191	272.30191
9	Palakkad	3425	184.95	1.7424	186.6924
10	Malappuram	1050	56.7	0.5412	57.2412
11	Kozhikode	325	17.55	0.165	17.715
12	Wayanad	550	29.7	0.33	30.03
13	Kannur	775	41.85	0.4092	42.2592
14	Kasaragod	300	16.2	0.1254	16.3254
	<b>Total</b>	<b>20904.22</b>	<b>1128.827</b>	<b>10.00</b>	<b>1138.827</b>

***The targets should be redistributed based on Agro Ecological Zone and the same should be communicated to this office on or before 18-06-2020***

The total financial requirement of the programme of Rs. 1138. 827 lakhs can be met from the current years' budget provision under the head of account 2401-00-800-18 Plan.

  
**Additional Director of Agriculture (CP)**

Copy to:

1. All Princiapl Agricultural Officers
2. Assistant Directors of Agriculture of all districts
3. TA to Director of Agriculture
4. All Additional Directors of Agriculture
5. Joint Director of Agriculture (WM)
6. Joint Director of Agriculture (VC)
7. Deputy Director of Agriculture (CD)
8. DDA, IT Cell ( for publishing in the website)
9. Planning section for allotment of funds
10. SW section
11. Stock file/ Spare