

Directorate of Agriculture Development and Farmers' Welfare

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CIRCULAR

Sub:- Annual plan 2022-23 - Scheme for Soil and Root Health Management and Productivity Improvement - Supply of Soil Ameliorants - Working Instructions issued _ Reg.

Ref:- GO (Rt) No 673/2022/AD dated 26/07/2022

As per the reference 1st cited, Government have accorded Administrative Sanction for the implementation of the the scheme “Soil and Root Health Management and Productivity Improvement” in which 'Supply of Soil Ameliorants' is one of the components during 2022-23.

Soil is the basis of farming activity. Soil health/quality refers to the physical, chemical and biological features of a soil that are essential for long term sustainable agricultural production with minimal environmental impact. Healthy soils have optimal physical, chemical and biological properties. Modern agricultural practices tend to deplete soil health and the improvement of soil health is essential for augmenting crop productivity. 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. Correcting soil acidity is very much essential for getting optimum yield from our crops. 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 this soil acidity(pH) and improve the soil fertility status and thereby the crop productivity.
- 2) To supplement Calcium and Magnesium deficiencies in the soils.
- 3) To improve the intake of primary, secondary and micro-nutrients by the crops by improving soil health status.
- 4) To sustain good soil health and improved agricultural practices.

Programme:

The common recommendation for correction of soil acidity for paddy crop is lime @ 600 Kg/Ha. This will vary from place to place based on soil test data. It is proposed to provide assistance @ Rs.5400/ha towards the cost of lime including application charges for paddy crop. The assistance will also be extended to other crops based on soil test data or other specific recommendation for the particular area limiting the expenditure to Rs.5400/- per Ha. If the quantity of lime required as per soil test data exceeds the common recommendation the cost for the excess quantity applied will be borne by the farmers themselves. The farmers who avail any assistance from any other scheme for the same purpose will not be considered for subsidy under this scheme.

An amount of Rs.2120 lakh is set apart for the subsidy of liming materials for an area of 39259.26 ha and an amount of Rs. 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. Tender or quotations should be invited observing Stores Purchase Rules for arrangement of the materials at the Co-operative Societies/ Co-operative Banks. The Government 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.

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 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 39259.26 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- September	75
April- December	90
April-March	100

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 5th of every month.

Project management and Duration

The project will be managed by the Additional Director of Agriculture (Crop Production) at the Directorate of Agriculture, and project implementation will be completed before 31/03/2023.

Financial Outlay:

The financial outlay for this programme is Rs. 2130.00 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)	55370.370455370.3704Subsidy per ha (Rs)	Total Assistance (Rs. Lakh)
1	Liming materials	39259.26	5400	2120.00

2	Transportation and handling charges			10.00
	Total	39259.26		2130.00

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	400	21.6	0.12	21.72
2	Kollam	400	21.6	0.12	21.72
3	Pathanamthitta	1000	54	0.35	54.35
4	Alappuzha	11500	621	2.00	623.00
5	Kottayam	6000	324	1.25	325.25
6	Idukki	359.26	19.4	0.10	19.50
7	Ernakulam	1700	326.7	0.50	92.30
8	Thrissur	6050	326.7	1.90	328.60
9	Palakkad	5300	286.2	1.60	287.80
10	Malappuram	4400	237.6	1.50	239.10
11	Kozhikode	400	21.6	0.10	21.70
12	Wayanad	700	37.8	0.18	37.98
13	Kannur	700	37.8	0.18	37.98
14	Kasaragod	350	18.9	0.10	19.00

	Total	39259.26	2120.0	10.0	2130.00
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The targets should be re distributed based on Agro Ecological Zone and the same should be communicated to this office on or before 10/08/2022

The total financial requirement of the programme of **Rs. 2130 lakh** can be met from the current years' budget provision under the head of account **2401-00-800-28 Plan**.

SUBHASH T.V. IAS
DIRECTOR
Director of Agriculture

To All Principal Agricultural Officers

Copy to: 1) Additional Directors of Agriculture
2) All Project Directors, ATMA
3) Joint Director of Agriculture (WM)
4) All Deputy Directors of Agriculture (WM)
5) Planning Section
6) SW Section
7) Stock File / Spare