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Directorate of Agriculture Development
& Farmer's Welfare, Vikas Bhavan,
Thiruvananthapuram
Dated: 05.01.2019

CIRCULAR

Sub: Agriculture Department-Flood- 2018-Proposal for Crop Rehabilitation- Soil and Root Health Management and Productivity Improvement - distribution of lime-working instructions- regarding

Ref: 1. G.O (Ms.) No. 147/2018/ AGRI dated 15.12.2018

2. G.O (Ms.) No. 151/2018/ AGRI dated 26.12.2018

As per the reference cited, Government have accorded sanction for the distribution of lime at a cost of Rs. 540 lakh under "Soil and Root Health Management and Productivity Improvement" scheme under the Head of Account 2401-00-800-28 (Plan) as part of the revival package to tide over the crisis caused by the recent floods.

More than 70 percent soils of the State are very strongly to moderately acidic with pH ranging from 4.5 to 6.0, while the water logged problem areas of Kuttanad, Kole and Kaippad lands have ultra acidic soils with pH less than 3.5. The predominantly acidic nature of soils of the State warrants a regular liming practice. One of the detrimental effects caused by the recent floods 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 have 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. The acidity of soils have also increased in most places after the floods which warrants application of soil ameliorants for correction of soil acidity and fertility improvement.

Objectives:

1. To correct the 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:

Based on the soil test data, lime @ 600 Kg/ ha should be applied to paddy crop. As per the scheme, soil ameliorants @ 600 kg/ha with assistance @ 75 % of total cost limited to Rs. 5400 /ha will be given. An amount of Rs. 540 lakh is set apart for the subsidy of liming materials for an area of 10000 ha.

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 Agricultural Officer will test the materials and quality materials alone will be distributed.

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:

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

This scheme is intended to be implemented in an area of 10000 hectares covering all districts of Kerala except Wayanad. In Wayanad district, seperate scheme under Wayanad package is being implemented for soil ameliorants.

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 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.

Monitoring:

Additional Director of Agriculture (CP) will be in charge of the programme at the State level. The Principal Agricultural Officers will monitor and co-ordinate the programme at the district level. Monthly progress report should be furnished to the Director of Agriculture by the 5th of every month.

Financial Outlay:

The financial outlay for this programme is Rs. 540 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.

The district wise physical and financial target is as follows:

Sl. No.	Name of District	Area in Ha	Financial (Rs. in lakh)
1	Kollam	95	5.13
2	Pathanamthitta	1700	91.8
3	Alappuzha	2874	155.196
4	Thrissur	2975	160.65
5	Palakkad	1051	56.754
6	Malappuram	1200	64.8
7	Kannur	75	4.05
8	Kasaragod	30	1.62
	Total	10000	540

The total financial requirement of the programme of Rs. 540 lakh can be met from the 20% plan cut under the head of account 2401-00-800-28 Plan.

Sd/-
Director of Agriculture

Copy to:

1. Principals Agricultural Officers of Kollam, Pathanamthitta, Alappuzha, Thrissur, Palakkad, Malappuram, Kannur and Kasaragod
2. TA to Director of Agriculture
3. All Additional Directors of Agriculture
4. DDA, IT Cell (for publishing in the website)
5. Planning section for allotment of funds
6. SW section
7. Stock file/ Spare


Additional Director of Agriculture (CP)