

**PROCEEDINGS OF THE DIRECTOR OF AGRICULTURE
DIRECTORATE OF AGRICULTURE DEVELOPMENT AND FARMERS'
WELFARE, VIKAS BHAVAN, THIRUVANANTHAPURAM**

(Present Dr.K.Vasuki. IAS)

Sub: Annual Plan 2021-22 – **Scheme on Soil and Root health management and productivity improvement** – Continuous Administrative sanction accorded – orders issued- reg:

Read: (1) G.O.(Rt) No.251/2019/AD dated.08.03.2019.
(2) Order No.ADFW/507/2020-TP2 dated 08.06.2020
(3) Order No.ADFW/507/2020-TP2 dated 18.08.2020
(4) Annual Plan 2020-21.
(5) G.O.(Rt) No.393/2020/Agri dated.22/4/2020.

Order No. ADFW/3162/2020-TP2

Dated: 23.04.2021

Government of Kerala, have accorded Administrative sanction for the implementation of the scheme '**Scheme on Soil and Root health management and productivity improvement**' during 2019-20 for components included in the Green Book vide reference 1st cited. Continuous Sanction was accorded for the scheme during the financial year 2020-21 vide reference (2) cited.

During the financial year 2021-22, there is a budget provision of Rs.3050.00 lakh for the above mentioned scheme under head of account 2401-00-800-28 (P) with the following components:

Sl. No.	Component	Amount (Rs. in lakh)
1	Soil ameliorants in selected districts	3000.00
2	Support for secondary and micro nutrients and green manure	25.00
3	Root health management	25.00
	TOTAL	3050.00

The components 'Soil ameliorants in selected districts' and 'Root Health Management' are continuing during the current year also. The details are as follows:

1. 'Soil ameliorants in selected districts' (Rs.3000.00 lakh)

Studies have shown that 90% of the soils in the State are acidic with over 50% strongly to extremely acidic. This highlights the need for regular liming practice to the soil especially in post flood scenario. It is proposed to implement the component 'Soil ameliorants in selected districts' with the following objectives.

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

Based on the soil test data, as per general recommendation, lime @ 600 kg /ha should 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. Assistance @ 75% limited to Rs.5400/ha towards the cost of soil ameliorants including application charge will be provided for paddy crop.

Neutralising value (Calcium carbonate equivalent) of liming materials

Liming materials differ markedly in their ability to neutralize 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 per cent. 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 neutralize acidity.

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)

This component is intended to be implemented in an area of 55370.3704 Ha covering all districts of Kerala. The farmers who avail assistance from any other scheme for the same purpose will not be eligible for subsidy under this scheme.

An amount of **Rs.3000.00 lakh** is set apart for implementation of this component. 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**.

Sl. No.	Item	Area (ha)	Subsidy per ha (Rs.)	Total Assistance (Rs in lakhs)
1	Liming materials	55370.3704	5400	2990.00
	Transportation and handling charges			10.00
				3000.00

(Rupees Thirty crore only)

2. Root health management practices (Rs.25.00 lakh)

To meet the ever growing food supply needs and effectively respond to the increasing demand on limited natural resources, new strategies are required to increase yield. There has been a shift in focus to the importance of roots for plant performance. According to Food and Agriculture Organization (FAO), top ranked stresses in agriculture include water, soil salinity and soil acidity. These factors all relate to roots and Root Health. Worldwide, more and more research is pointing to root health as the key for future crop productivity improvements. It has been estimated that 80% of all plant problems start with soil/root problems. Increased use of agronomic practices such as no-till and irrigation can increase prevalence of soil-borne diseases, which compromise Root Health. The roots of most plants are prone to attack by pathogenic fungi and nematodes, but the effects of such organisms may go unnoticed unless the attack is sufficiently severe to cause crop failure. The clear link between Root Health and increased yield has been indisputably established through latest researches.