

TV (1) 19859/2018

Directorate of Agriculture Development  
and farmers welfare Department  
Thiruvananthapuram  
Dated :14/05/2018.

**CIRCULAR**

Sub:- Annual Plan 2018- 19 – Soil testing lab in selected Agro Service Centres under Scheme “Agro Service Centres and Service Delivery” 2018-19 – Working instruction issued – Reg.

Ref:- 1 . G.O (Rt)No. 818/2017 /AGRI Dt. Thiruvananthapuram 24/8/2017  
2 . Order No: TP(2) 7465/18 Dt. 28/04/2018 of Director of Agriculture

As per the reference cited 1<sup>st</sup> above, administrative sanction has been accorded for the scheme “Agro Service Centres and Service Delivery” during 2017-18. As per the Annual Plan 2018-19, the scheme is proposed to be continued during the current financial year with budget allocation of Rs. 3167 lakhs and as per the reference cited 2<sup>nd</sup> continuous Administrative Sanction has been accorded for the scheme “**Agro Service Centres and Service Delivery**” with a provision of total Rs. 2471.705 lakhs under the H/A 2401-00-113-83 and 4401-00-113-98 plan; for the year 2018- 19. One of the component of the scheme is **Soil Testing Labs** attached to Agroservice centres for which an amount of **Rs. 50.00 lakhs** is set apart under HA/c 2401-00-113-83.

Agro service Centres (ASC) are established at block level to facilitate integration of services like mechanization, ATMA based extension, credit support, weather advisory services, soil testing support and technology based services. Application of plant nutrients based on soil analysis is key factor influencing crop production. There exists a wide gap between the number of samples analysed through department laboratories and the actual demand in the field. To reduce this gap to the maximum extent, six stationary soil testing labs were established attached to Agroservice centres functioning under the Department of Agriculture in Parassala, Koothuparamba, Kothamangalam, Pazhayannur , Iringalakkuda , Neeleswaram and Kunnummel blocks, so as to bring the soil testing service to the doorstep of the farmer.

It is proposed to establish new soil testing labs attached to **2 selected agroservice centres** having building and water facilities during 2018-19. Moreover, it is also proposed to provide honorarium to analysts and laboratory assistants engaged in the 6 soil testing labs already established during the 12<sup>th</sup> plan period as these centres are yet to attain self-sustainability.

## Objectives

- To establish 2 soil testing labs attached to 2 well performing agroservice centres.
- To popularise soil testing practice among farmers.
- To ensure balanced use of fertilizers
- To encourage scientific agricultural practice
- To act as a tool for sustainable agriculture
- To reduce cost of cultivation and improve farmers' profit.
- To strengthen existing agroservice centres by improving their facilities.

## Programme

Two Agroservice Centres having pucca building facilities (1000 sq. feet) will be selected for establishment of soil testing laboratories. It should have proper facilities for installation of equipments, electricity and water connection, storage space for samples etc. Major and micro nutrients, pH, TSS and electrical conductivity of soil samples will be tested. It is proposed to analyse 5000 samples per year/lab.

The basic requirement for setting up new soil testing lab are furnished below:.

### a) Equipments

1. Colorimeter
2. Conductivity meter
3. pH meter
4. Shaking apparatus
5. Electronic Balance
6. Analytical Balance/Top loading balance
7. Drying oven
8. Computer system with appropriate software
9. Table top centrifuge
10. Water still
11. Flame Photometer
12. Hotplate
13. Glasswares/polywares like Pipette, Burettes, conical flask, measuring cylinders etc. and their racks.
14. Refrigerator.
15. Portable Genset of 7.5 KVA (silent type) furniture like table, desk, almirah, shelves etc. Other items like LPG Gas cylinder, Metal trolley, Bunsen burner etc.

The approximate cost of equipments for a soil testing laboratory works out to **Rs.5.55 lakhs.**



a) Reagents required for analyzing 5000 samples

Sl. No.	Chemical	Requirement for 5000 samples	Approximate Price (Rs.)
1	Conc. Sulphuric acid	62.5 ltr	11375
2	Conc. Hydrochloric acid LR	7.5 ltr	2310
3	Conc. Hydrochloric acid AR	25 ltr	7700
4	Ammonium fluoride	250 g	320
5	Ammonium molybdate	350 g	5705
6	Potassium dichromate	3000 g	1565
7	Boric acid	1000 g	1000
8	Ammonium acetate	12.5 kg	7500
9	Ascorbic acid	125 g	965
10	Antimony potassium tartarate	5 g	20
11	Filter paper Whatmann No. 1	500 sheets	5000
12	Buffer tablets pH 4	50 tabs	770
13	Buffer tablet pH 7 (capsule)	50 tabs	770
	<b>Total cost of reagents</b>		<b>45000</b>

Thus the total cost of equipments and reagents comes to approximately **Rs.6.00 lakhs.**

b) Electricity and Water

Regular supply of electricity and water is to be ensured for smooth running of the lab. Many of the equipments used now are running on electricity. So also distilled water is required for which 'water still' is used which utilizes electricity for distilling water received from outside source. An amount of **Rs.1.00 lakh** may be set apart for meeting the cost of electricity and ensuring quality water supply for the soil testing lab.

c) Building

It may be required to refurbish the existing building for creating facilities for the setting up of the soil testing laboratory. An amount of **Rs.1.00 lakh** per lab is set apart for this purpose.

Total cost of establishing a soil testing laboratory comes to **Rs.8.00 lakhs.**

Technical personnel and Training

A technical person having B.Sc.(Ag.)/B.Sc.(Chem.) degree may be posted as '**Analyst**' for carrying out the analytical work in each soil testing lab. He/she must be given training in the Department Soil Testing Lab of the respective district in the various aspects of soil testing starting from drawing soil samples to analysis and fertilizer recommendation. Monthly **honorarium of Rs.15000/-** may be paid to such personnel.

**Two** persons with minimum Higher Secondary qualification in Science or VHSC in Agriculture may also be posted as **lab assistants** in each lab to assist the analyst in laboratory activities. They may also be given necessary technical training in the laboratories of the Department. **Remuneration @ Rs.5000/-per month** shall be paid to each of them.

## Operationalisation and activities

The Agro Service Centres are now functioning under a 'Management Committee' constituted at the block level. The functioning of soil testing labs will automatically come under their supervision and control. **A nominal charge may be collected for testing soil samples which may be fixed by the management committee of the Agro Service Centre on a no profit no loss basis.**

The Krishi Bhavans coming under the block where these labs are established shall ensure that necessary samples for analysis reach these labs. Farmers of adjacent blocks can also be catered to, if required. Krishi Bhavans and ADA offices shall give necessary publicity and awareness on soil testing so that farmers avail themselves of this facility. Mobile Agro clinics of each block can be used for collection of samples from Krishi Bhavans during scheduled visits and for the delivery of test results in their future visits. Activities of these soil testing laboratories will be reviewed every month at ADA level and necessary guidance given to make up the shortfalls noticed, if any.

Soil Health Cards will be issued to the farmers availing facility of these labs. Such Soil Health Cards will be issued to farmers based on the existing Soil-based Plant Nutrient Management Information System. The format available in the portal [www.keralasoilfertility.net](http://www.keralasoilfertility.net) shall be made use of for this purpose.

The abstract of the programme is furnished below.

Sl. No	Item	Amount required for setting 2 new labs	Amount required for maintenance of 7 existing labs	Total
1	Purchase of equipments, reagents furniture etc for soil testing labs @ 6lakhs/lab	12.00	13.00	25.00
2	Electrification & Water connection @ 1 lakh/lab	2.00		2.00
3	Refurnishing of existing building @ 1lakh/lab	2.00		2.00
4	Honararium to one analyst and 2 lab assistants @ 15000/- per month and 5000/- per month respectively @ 3 lakhs/lab	6.00	15.00	21.00
	<b>Grand Total</b>	<b>22.00</b>	<b>28.00</b>	<b>50.00</b>



ADAs of Parassala, Koothuparamba, Kothamangalam, Pazhayannur, Irinjalakkuda Neeleswaram and Kunnummel blocks will prepare a proposal of the requirement of funds for functioning of the existing soil testing labs in Agro Service Centres and submit through Project Director (ATMA) before 20.06.2018.

Eligible Agro Service Centres are to be identified by **Principal Agricultural Officer/Project Director (ATMA)** concerned and suitable proposals shall be submitted for sanction before 30.06.2018 to the Additional Director of Agriculture (Extn.). State level committee under the chairmanship of Additional Director of Agriculture (Extension) with Joint Director of Agriculture (AR & T) and Assistant Director of Agriculture concerned at HQ as members will scrutinise the proposal based on previous records and finalise the project to be implemented, and funds will be allotted. An amount of **Rs. 50.00 lakhs** is set apart for this purpose under the H/A 2401-00-113-83 Plan from current year budget provision.

Sd/-

**Director of Agriculture**

  
Assistant Director of Agriculture (TV)  
Directorate of Agriculture  
Vikas Bhavan, Trivandrum - 33

To

All Principal Agricultural Officers,  
All Project Directors, ATMA.  
All Assistant directors of Agriculture.  
All Agricultural Officers, Krishibhavans.

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