

File No. 14-33/2022-Fert. Use
Government of India
Ministry of Agriculture & Farmers Welfare
Department of Agriculture & Farmers Welfare
(Fertilizer Use Cell / INM Division)

KrishiBhawan, New Delhi
Dated the 22nd June, 2023

To

All States Principal Secretaries Agriculture
/Director of Agriculture/Nodal Officers of Soil Health Card,
States Government/UTs

Subject: Implementation of Soil Health Card Scheme under "Soil Health & Fertility" of Rashtriya Krishi Vikas Yojana (RKVY) from the year 2023-24 -Reg.

Sir,

I am directed to refer to this Department's letter of even no. dated 27.02.2023 and to say that in suppression of all the existing guidelines/instructions, following modifications in the scheme have been made: -

- i. The guidelines for setting of VLSTLs have been revised and enclosed herewith for necessary action.
- ii. All VLSTLs will be registered on the portal
- iii. Tests to VLEs may be allocated as per number of test specified in the enclosed guidelines.
- iv. State will ensure 100% user registration for State user, District user and all the Soil Testing Labs (STLs) Users and their Agents for the soil sample collection by 30.06.2023.
- v. Proper protocol to be followed for Annual Maintenance of labs by state owned agencies / or by ICAR/KVKs.
- vi. Timely validation of reagents, standard solutions, consumables items etc used in soil testing labs may be ensured.

This issue with the approval of competent authority.



(Chandra Shekhar Prasad)

Under Secretary to the Govt. of India

Copy to:

1. PPS to Secretary (A&FW)
2. PPS to Add. Secretary (INM)

3. PPS to JS (INM)
4. DS (INM)
5. Fertilizer Use Cell
6. Mr. Sandeep Kondaji CEO, Klonec Automation Systems Pvt. Ltd., E-mail ID:sandeep.kondaji@krishitantra.com

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of testing. This cell not change its cell has model (C7V) and greater

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line in bus can cause soldering damage and cause short circuit when P
battery voltage exceed

(Company Logo/Signature)

Chairman of the Board of Directors

On behalf of the Board of Directors
Mr. Sandeep Kondaji

Guidelines for establishment of Village Level Soil Testing Lab under Soil Health and Fertility Scheme of RKVY from year 2023-24 onwards

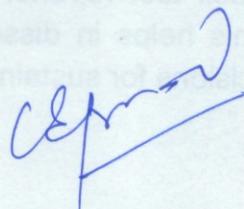
1. Introduction:

Soil Health Card helps in evaluating the nutrient content and fertility of soil. It provides information based on various nutrients. This data is crucial for delivering the appropriate fertilizer recommendation. Soil management is needed for soil fertility and crop productivity. By analysing soil health by these cards, farmers can understand the specific nutrient deficiency or imbalance in their soil. This allows them to make informed decision about the type and quality of fertilizer required. Therefore with the use of soil health card, the inputs provided can lead to higher yield, better quality crops and increased profitability farmers thus doubling their income. Because of soil health card sustainable agriculture practices are done preventing environmental degradation. Soil Health Card plays crucial role in formulating efficient agriculture policy and programme. The data collected from soil health card is utilized to assess overall soil health status across the region identifying trend and development target intervention. This help in designing policy related to soil management, agriculture extension services and research and development in agriculture.

The Soil Health Cards (SHCs) scheme introduced in the year 2014-15 to assist State Governments to issue soil health cards to all farmers in the country. Soil health card provides information to farmers on nutrient status of their soil along with recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility. This scheme has been merged as Soil Health & Fertility of Rashtriya Krishi Vikas Yojana (RKVY) from the year 2022-23.

The main objective of the scheme is to assist states in promoting Integrated Nutrient Management (INM) through judicious use of chemical fertilizers including secondary and micro nutrients in conjunction with organic manures & bio-fertilizers for improving soil health and its productivity. This scheme has sub-components like, setting up/ strengthening of Soil Testing, Fertilizers/ Bio-fertilizers & Organic fertilizers Quality Control Labs, promoting Micro-nutrients, and testing soil samples to issue Soil Health Cards. Soil Samples should be processed following standard procedures and analyzed for various parameters viz, pH, electrical conductivity (EC), Organic Carbon, available N, P, K, S and micronutrients (Zn, Cu, Fe, Mn& B).Soil Health Card provides information to farmers on soil nutrient status of their soil and recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility.

To popularize the soil test analysis in a campaign mode and to create awareness among the farmers about the soil health for judicious use of chemical fertilizers, organic manure, the component of 'Setting up of Village Level STLs' is being implemented under the scheme. The aims of Soil Health & Fertility scheme is to promote judicious



use of fertilizers as well as crop specific sustainable soil health management by using ICT enabled management system. Village level labs can also be set up by SHGs under The Rural Awareness Works Experience (RAWE) programme, Krishi Sakhis, students of Govt. schools, Agriculture graduates from SAUs, PACS etc.

The decentralization of laboratories at village level facilitates farmers to find the laboratories very near to his dwelling. Target for setting of 7500 labs has been kept for the three years i.e. 2023-26 in the country. As it will be operated by local youth; it will not only help in employment generation but also to ensure behavioral changes of frames for adopting SHC recommendations.

2. Objectives:

(i) Accessible and Affordable Soil Testing:

The primary objective of village-level soil testing labs is to provide easy access to soil testing facilities for farmers at the grassroots level. By establishing labs within the village or nearby areas, farmers can conveniently get their soil samples tested without the need to travel long distances or incur additional expenses.

(ii) Timely and Accurate Soil Analysis:

The labs aim to provide farmers with timely and accurate soil analysis results. By analyzing the soil samples using standardized techniques and equipment, these labs ensure that farmers receive reliable information about their soil's health status. This allows farmers to make informed decisions regarding fertilizer application and soil management practices.

(iii) Customized Soil Nutrient Recommendations:

Village-level soil testing labs help generate personalized soil nutrient recommendations based on the analysis results. By considering the specific nutrient requirements of different crops and the nutrient levels in the soil, these labs provide farmers with tailored recommendations for fertilizer application, thus promoting efficient nutrient management practices.

(iv) Soil Health Awareness and Education:

These labs serve as educational platforms to increase farmers' awareness about soil health and the importance of soil testing. Lab technicians can interact with farmers, explain the soil test reports, and provide guidance on appropriate soil management practices. This helps in disseminating knowledge and empowering farmers to make informed decisions for sustainable agricultural practices.

(v) Cost-effective Soil Management:

Village-level soil testing labs enable farmers to optimize their fertilizer use and minimize input costs. By accurately determining the nutrient content of the soil, farmers can avoid over- or under-application of fertilizers, thus preventing nutrient imbalances and reducing unnecessary expenses. This leads to cost-effective soil management and improved economic returns for farmers.

(vi) Soil Health Monitoring and Long-term Planning:

Soil testing labs also contribute to long-term soil health monitoring and planning. By regularly testing soil samples over time, farmers can track changes in soil health parameters and take proactive measures to prevent soil degradation. This promotes sustainable land management practices and helps in maintaining soil fertility for future generations.

(vii) Data Collection for Agricultural Research:

Village-level soil testing labs contribute to the collection of valuable soil data at the local level. This data can be utilized by agricultural research institutions, universities, and government agencies for conducting studies, formulating policies, and developing region-specific agricultural interventions. It aids in the generation of scientific knowledge and evidence-based decision-making in agriculture.

(viii) Employment generation for rural youth:

As village level soil testing labs are to be set up by local youth. This will increase employment in rural areas.

(ix) Strengthening of Soil Testing Laboratories in the country:

It will increase the number of soil testing laboratories in the country and ultimately it will help to increase the testing capacity of soil samples. Therefore, it will reduce load on static labs and will help farmers to get tested their Soil at door steps.

3. Strategy:

To achieve the above objectives, the following strategies will be adopted: -

- (i) Identification of individual entrepreneur i.e. rural youth and community based entrepreneurs i.e. Self Help Groups, PACs, Schools, Agriculture Universities etc for setting up of Village Level Soil Testing Labs
- (ii) Organizing training of VLSTLs on soil sampling, testing, generation of soil health card by manufacturers and state government.
- (iii) VLSTLs will further educate farmers about fertilizer recommendation and crop recommendation.

4. Scheme Structure

The State Level Executive Committee (SLEC) on the recommendation of District Level Executive Level Committee (DLEC) will approve the empanelment of VLSTLs.

4.1 State Level Executive Committee (SLEC):

The SLEC of RKVY will also be the SLEC for SH&F. It will oversee the implementation of scheme components of the respective states through regular meetings with the nodal and other line Departments.

4.2 District Level Executive Committee

District Level Executive committee (DLEC) will be responsible for carrying forward the objectives of the scheme for project formulation, implementation and monitoring. The District Level Executive Committee (DLEC) will comprise of the following.

District Collector/ Deputy Commissioner	Chairman
Deputy Director (Agriculture/District Agriculture Officer	Member Secretary
District Horticulture Officer	Member
Soil Testing Officer	Member
Representative from KVKS/SAUs	Member

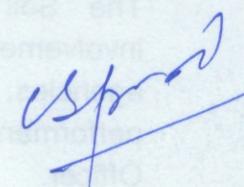
4.3 DLEC will be responsible for carrying forward the objectives of the scheme for project evaluation, implementation and monitoring. The office of Deputy Director (Agri) / Distt. Agriculture Officer shall be the district nodal agency with following functions.

- (I) Identification of individual beneficiary i.e. village level young entrepreneur and community based beneficiaries i.e. PACS, SHGs, School, Agriculture University etc in transparent and time bound manner.
- (II) Identification of the premises for establishment of VLSTL which will include the owned or rented space by private entrepreneurs or school labs, SAUs labs, SHGs office, PACS office etc.

- (III) Geo-tagging of above such premises will also be ensured through the revamped SHC portal and mobile application. .
- (IV) Verification of proof of procured Lab equipment / inputs.
- (V) The DLEC will submit proposal to SLEC and SLEC shall ensure selection of beneficiary and approve it within 30 days from the date of receipt of the application(s).
- (VI) Training to the beneficiary Entrepreneur will be organized by VLSTL supplier. Govt. soil testing laboratories /KVKs/SAUs etc will provide training on sampling, registration, testing and generating soil health through mobile application.
- (VII) The jurisdiction preferably one SHC entrepreneur/ SHG in one Gram Panchayat/Gram Sabha of the village level soil testing project will be decided by DLEC.
- (VIII) In case of Cluster of Villages, DLEC will decide the area of Jurisdiction of Village Level Entrepreneur.
- (IX) One percent of the samples tested by the beneficiary will be validated by checking of the same sample by three different labs including static labs by state agencies / ICAR-KVKs/any third party.
- (X) Testing capacity of each VLSTL is approximately 3000 soil samples in a year. Accordingly, each VLSTL may be assigned soil testing of 300 soil samples @Rs 300/per soil sample for which cost will be borne under the scheme. In addition to that, for the next 500 soil samples, VLE will be given incentive @ Rs.20 per soil sample only from scheme. After that for soil testing will be undertaken by VLE as per the rate decided by the respective State Government.

5. BENEFICIARY:

- (i) The beneficiary/village level entrepreneur should be a youth whose age should not be below 18 years and should not be more than 27 years. SHGs, FPOs, PACs can also be enrolled as VLSTL. Eligibility of enrollment of these groups will be decided by DLEC.
- (ii) The beneficiary entrepreneur must be 10th pass with science and knowledge of computer.
- (iii) The applicant entrepreneur shall submit the application along with requisite qualification certificate, PAN Card, Aadhar Card to the office of Deputy Director/District Agriculture Officer.
- (iv) The applicant/entrepreneur group should have their own premises/ rented building with lease agreement for atleast four years



6. Financial Assistance & Timelines:

- (i) Under the scheme one time financial assistance of Rs. 1.50 lakh will be given for establishment of Village Level Soil Testing Lab (VLSTL)
- (ii) SLEC will finalize the entrepreneur's proposals, received from the District Level Executive Committee (DLEC). The entire procedure will take maximum one-month time.
- (iii) State Government will release financial assistance to entrepreneurs within a week after approval of the application.
- (iv) Entrepreneurs after receiving fund will submit receipts of procurement of lab equipments, consumables etc. will to DLEC within 15 days.

7. Timelines for sampling and testing: -

- i. Sampling and registration on portal: 0-1 days
- ii. Analysis of soil samples : 2-4 days
- iii. Reporting of analytical data by Mobile App and generation of SHC : 4-5 days

8. Role of Panchayati Raj Institutions (PRIs), SHGs, PACS, SAUs, Govt. Schools, and KVKs/ICAR:-

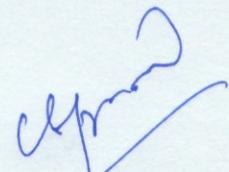
Gram Panchayats/SHGs, Krishi Sakhi under NRLM / RAWE, PACS, SAUs, KVKs/ ICAR Government Schools etc can play vital role in agricultural developments. The State Government will ensure active participation of these institutions in the implementation of Soil Health Management. PRIs can organize capacity-building programs for farmers to enhance their understanding of soil testing and its implications. They can arrange training sessions in collaboration with agricultural experts and extension officers to familiarize farmers with the process of soil sampling, interpretation of soil test reports, and adoption of recommended soil management practices.

9. Monitoring of activities:

District Agriculture Officer in close coordination of KVKs will be responsible for monitoring of the projects and soil sampling, testing and generating SHC as per timelines mentioned in Para 7 above.

10. Impact Assessment, Periodic Evaluation and Reporting

- (i) The Soil Health Card Scheme will be implemented through active involvement and coordination of State Governments, local implementing agencies, beneficiary entrepreneurs and farmers. A periodic review of performance and outcome will be ensured by the office of District Agriculture Officer.



- (ii) Centre/State Government/ICAR will evaluate performance of the this component of the scheme by frequent field visits.

11. Expected outcome:

The establishment of village-level soil testing labs is expected to result in

- (i) Enhanced soil health awareness,
- (ii) Informed decision-making,
- (iii) Customized nutrient recommendations,
- (iv) Sustainable soil management,
- (v) Cost-effective fertilizer use,
- (vi) Improved crop yields and quality,
- (vii) Environmental sustainability, and
- (viii) Knowledge generation.

These outcomes collectively contribute to sustainable agricultural practices, increased productivity, and the well-being of farmers and rural communities.

12. Training of Beneficiary Entrepreneur:

The training programme will be organized by State Government and Manufacturer for beneficiary entrepreneur. Training will include how to collect sample using mobile application, sampling Methodology, how to run the test in village level soil testing labs, maintenance of soil testing machine, how to use the consumables, and finally how to generate the soil health card using test results through mobile application on SHC portal. Entrepreneurs will also be trained for awareness generation of farmers about fertilizer use and crop recommendation based on soil health card.

13. Financial Structure of project of Village Level Soil Testing Lab.

Sr.No.	Item	Cost (Rs.in Lakh)
1.	Soil Testing Machinery with reagents & sample shaker machine and AMC for one year	1.00
2.	Distilled Water, pH Meter, Conductivity meter, Electronic balance, Glass-ware, filter- papers and other need based lab consumables.	0.50
	Total	1.50

14. Sample collection and testing Charges applicable:

Sample collection, Testing and generation of Soil Health Card to farmers- @ the rate of Rs. 300/- per sample which will involve;

Sl. No.	Item	Cost (in Rs.)
1	Soil Sample Collection	Rs. 40
2.	Consumable used for testing	Rs. 150
3.	Awareness of farmers	Rs. 110
	Total	Rs.300

15. Payment of testing Charges:

Payment to VLSTLs will be made through DBT mode.