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Soil Health Card

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“Swasth Dharaa, Khet Haraa” Over 25 Crore Soil Health Cards Distributed Across the Country

The year 2015 was marked as the International Year of Soils. It was also when India launched its landmark Soil Health Card Scheme on 19 February, aiming to assess the nutrient condition of every farm across the country. The scheme was officially launched by Prime Minister Shri Narendra Modi in Suratgarh, Rajasthan. It supports State Governments in providing farmers with detailed reports on soil health. These cards offer recommendations on how to improve soil fertility and guide farmers to adopt sustainable practices. From the year 2022–23, the scheme has been included as a component under the Rashtriya Krishi Vikas Yojana, and is now known as ‘Soil Health and Fertility’.

A Soil Health Card is a printed report given to farmers for each of their land holdings. It shows the condition of the soil by testing 12 key parameters, namely Nitrogen, Phosphorus, Potassium, Sulphur (Macro-nutrients); Zinc, Iron, Copper, Manganese, Boron (Micro - nutrients); and pH (Acidity or Basicity), EC (Electrical Conductivity) and OC (Organic Carbon). The scheme helps farmers understand what their soil needs through regular testing and provides guidance every 2 years. Each card gives farmers a clear picture of the nutrient status of their land. It also suggests the right amount of fertilisers, bio-fertilisers, organic inputs, and soil treatments to help them take better care of their soil over time.

Soil Sampling and Testing Process

Soil samples are taken from a depth of 15–20 cm using a V-shaped cut, collected from four corners and the centre of the field.

Samples are collected in a grid of 2.5 hectares in irrigated areas and 10 hectares in rain-fed areas using GPS tools and revenue maps.

Sampling is done after harvest of Rabi and Kharif crops, or when there is no standing crop in the field.

Trained personnel, agriculture department staff, or students from agricultural colleges collect the samples.

Quality assurance and costs

1% of the samples are cross-checked in referral laboratories for quality assurance. The central government provides ₹190 per sample to cover costs for collection, testing, soil health card generation, and distribution.

Card Validity

A Soil Health Card is issued once every 3 years.

The next card in the following cycle captures changes in soil health over time.

Objectives of soil health card scheme:

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To provide every farmer with a **Soil Health Card once every two years**. This helps identify nutrient gaps in the soil and improves fertiliser practices.

To strengthen the functioning of Soil Testing Laboratories by building capacity, engaging agricultural students, and linking with institutions like the Indian Council of Agricultural Research and State Agricultural Universities.

To identify soil fertility issues by following uniform sampling methods across states. This also includes designing fertiliser recommendations at the taluka or block level in selected districts.

To encourage the use of nutrient management practices that are based on soil test results. This helps improve how efficiently nutrients are used by crops.

To offer financial support to farmers so they can correct nutrient deficiencies and adopt balanced and integrated nutrient management suited to their cropping patterns.

To train district and state-level officers, along with progressive farmers, so that they can promote the proper use of nutrients at the grassroots level.

Application Process



The Soil Health Card Scheme follows a simple and farmer-friendly application process. Here are the steps involved:

- Step 1** The farmer visits the District Agriculture Officer or Block Agriculture Officer to request soil testing and the generation of a Soil Health Card.
- Step 2** The officer checks if the farmer's district or village is covered under the State Annual Action Plan for Soil Health Card generation. If it is, the process moves forward.
- Step 3** An authorised agent is sent to the farmer's field. The agent collects the farmer's details, notes the land information and uses a mobile application to geo-tag the field. A soil sample is then taken for testing.
- Step 4** The soil sample is analysed in a recognised Soil Testing Laboratory. The test is done based on specific parameters related to soil health.
- Step 5** After the test, a Soil Health Report is prepared. This report provides results and practical recommendations on which crops are best suited for that soil, and what type and quantity of fertilisers should be applied.

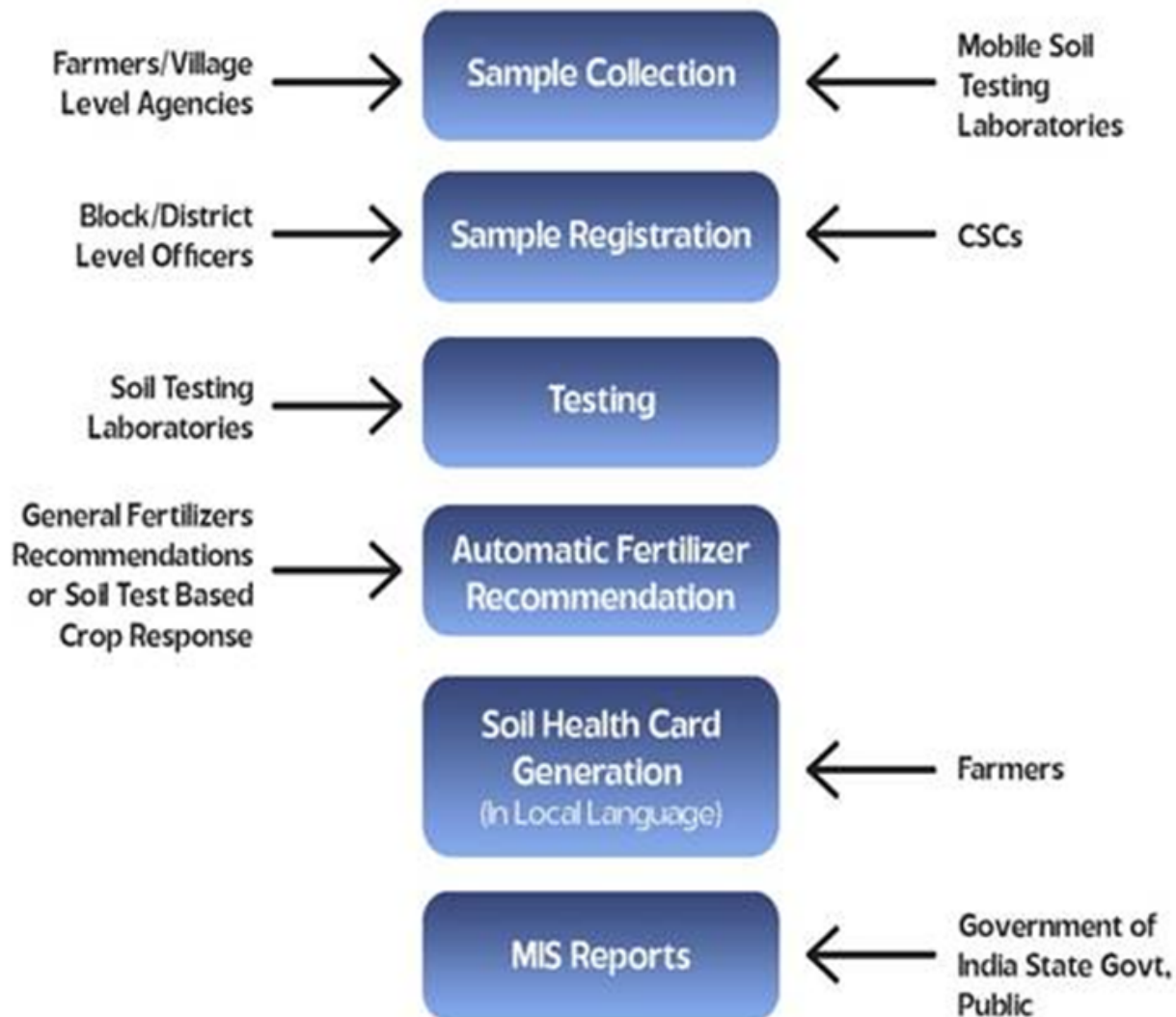
Soil Health Card Portal

The Soil Health Card Portal is an online and mobile-based platform created for the Ministry of Agriculture and Farmers Welfare, Government of India. It helps generate Soil Health Cards in a standard format that can be used across the country. The cards are available in 22 languages, 5 dialects, and in local units to make them easy for farmers to understand.

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Soil Health Card Portal - Workflow



Soil Testing Laboratories

As part of the scheme, soil samples are collected from various farms and tested in approved Soil Testing Laboratories (SLT). These tests follow the guidelines set under the scheme. The results are then uploaded to the National Soil Health Card portal. This portal is used to register samples, store test reports and create Soil Health Cards. It also provides fertiliser recommendations and helps track the overall progress of the programme.

School Soil Health Programme

The Department of Agriculture and Farmers Welfare set up soil health labs in 20 schools in rural areas as part of a pilot programme. Learning modules were prepared for students from Classes 6 to 12, as well as for teachers. The aim is to make students aware about soil health for sustainable agriculture practices. These were shared with schools to support the training process.

Both students and teachers were trained to collect soil samples, carry out tests, and generate Soil Health Cards using a mobile app developed specially for this programme. School students collected the soil, tested it in the lab,

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and created the health cards. They also played a key role in sharing the recommendations of these cards with farmers, helping them understand how to use fertilisers wisely and choose the right crops.

Technological Advancements

The Soil Health Card portal has been upgraded and now includes a Geographic Information System. This allows all soil test results to be viewed on an interactive map.

A mobile application (SHC Mobile App) has been introduced to make the process easier for both farmers and officials involved in implementation and monitoring.

The app restricts soil sample collection to the designated area of the village-level operator. This ensures accuracy and accountability.

It automatically captures the exact location using latitude and longitude, removing the need for manual entry.

Each sample is assigned a unique QR code. This links the sample directly to its test results on the portal.

Test results from geo-tagged laboratories are uploaded automatically to the central system, making the process transparent and tamper-proof.

The upgraded system has been in use since April 2023. All soil samples are now collected through the mobile app and Soil Health Cards are generated on the new digital portal.

Conclusion

The Soil Health Card Scheme has transformed how farmers think about their land. It has brought scientific understanding into hands of millions of farmers, helping them make better decisions and improve their livelihoods. The data-driven approach of the scheme has reduced input costs, boosted productivity, and promoted long-term soil care. By connecting testing labs, digital tools, schools, and communities, the scheme has created a robust system that puts the farmer at the centre. As India moves towards climate-resilient and sustainable agriculture, the Soil Health Card Scheme remains a model of how data, awareness, and grassroots support can together lead to real change. Continued investment and innovation under the scheme will be key to building a future where Indian soils stay fertile, healthy, and productive for generations to come.