

## INTRODUCTION

Soil Health Card (SHC) is a Government of India's scheme promoted by the Department of Agriculture & Co-operation under the Ministry of Agriculture and Farmers' Welfare. It is being implemented through the Department of Agriculture of all the State and Union Territory Governments. A SHC is meant to give each farmer soil nutrient status of his/her holding and advice him/her on the dosage of fertilizers and also the needed soil amendments, that s/he should apply to maintain soil health in the long run. SHC is a printed report that a farmer will be handed over for each of his holdings. It will contain the status of his soil with respect to 12 parameters, namely N, P, K (Macro-nutrients); S (Secondary- nutrient); Zn, Fe, Cu, Mn, Bo (Micro - nutrients); and pH, EC, OC (Physical parameters). Based on this, the SHC will also indicate fertilizer recommendations and soil amendment required for the farm.



Prime Minister Narendra Modi launched Soil Health Card Scheme (SHC) on 19th February 2015 at Suratgarh, Rajasthan & the Ministry of Agriculture and Farmers' Welfare introduced the Soil Health Card (SHC) scheme. A soil health card provides information on the nutrient status of soil, along with recommendations on the dosage of nutrients to be utilised for improving its fertility and health. Soil Health Card Day: Soil Health Card Day commemorates the day when the SHC scheme was launched by the Prime Minister on February 19, 2015. The Ministry of Agriculture introduced the SHC scheme on December 5, 2015.

**SHC is a printed report which contains nutrient status of soil with respect to 12 nutrients:** pH, Electrical Conductivity (EC), Organic Carbon (OC), Nitrogen (N), Phosphorus (P), Potassium (K), Sulphur (S), Zinc (Zn), Boron (B), Iron (Fe), Manganese (Mn), Copper (Cu) of farm holdings.

SHC will be provided to all farmers in the country at an interval of 3 years to enable the farmers to apply recommended doses of nutrients based on soil test values to realize improved and sustainable soil health and fertility, low costs and higher profits. Farmers can take a printout of the card from the SHC portal, which has a database of all harvesting seasons and is available in 21 languages.

# SOIL HEALTH CARD: SOIL FERTILITY

Hansa Baradwal<sup>1</sup> and Divya Choudhary<sup>2</sup>

<sup>1</sup>Institute of Agriculture Science Bundelkhand University, Jhansi

<sup>2</sup>SKRAU, Bikaner



## OBJECTIVES OF SHC SCHEME:

- To improve soil quality and profitability of farmers.
- Employment generation for rural youth.
- To update information on soil analysis.
- To provide soil testing facilities to farmers at their doorstep.



## SOIL TESTING NORMS: -

- Soil samples are drawn in a grid of 2.5 ha in irrigated areas and 10 ha in rain-fed areas with the help of the Global Positioning System (GPS) tools and revenue maps.
- Soil samples are processed through standard procedures and analyzed for the above mentioned 12 parameters.
- The State Government will collect samples through the staff of their Department of Agriculture or through the staff of an outsourced agency.
- The State Government may also involve the students of local Agriculture/Science Colleges.
- Soil Samples are collected generally two times in a year, after harvesting of Rabi and Kharif Crop respectively or when there is no standing crop in the field.

## SHC SIGNIFICANCE:

- **Insufficiency of Nutrients:** The government launched the SHC scheme as an initiative to curb the overuse of urea or nitrogenous fertilizers causing a deficiency of nutrients in soil like potassium, nitrogen, Sulphur, zinc, boron, copper and phosphorus.
- **Soil Productivity:** Farmers can assess and raise the soil and crop productivity using key inputs from the card that carries crop-wise recommendations and other physical parameters of fertilizers and nutrients required for farm lands.
- **Increase in Soil Fertility:** With the help of the SHC, farmers can improve integrated nutrient management by judiciously using the soil nutrients.
- **After getting SHC** farmers have reduced N, P and K use, especially nitrogen use and increased the use of micronutrients which helped them to increase fertility.
- **Crop-wise Guidance:** It is a field-specific report that helps the farmers to receive crop-wise recommendations of required fertilizers and nutrients in each type of soil.
- **Fertilizer Based Recommendations:** SHC offers two sets of fertilizer recommendations for six crops, including recommendations for organic manures.

## DRAWBACKS ASSOCIATED WITH SHC:



- **Inadequate Understanding:** Many farmers are unable to understand the content, hence unable to follow the recommended practices.
- **Issues in Collecting Variable Samples:** The Number of soil samples per unit area are not based on soil variability.
- **Concerns Regarding Coordination:** Lack of Coordination among agricultural extension officers and farmers.
- **Lack of Important Aspects:** Soil health card does not include essential characteristics like moisture retention and microbial activity.
- **Equal Attentiveness:** The soil health card is more focused on chemical nutrient indicators; among physical and biological properties only soil color is included.
- **Exclusion of Important Aspects:** Some important indicators are not included in this scheme such as:
  - cropping history,
  - water resources (soil moisture),
  - slope of soil,
  - depth of soil,
  - color of soil,
  - soil texture (bulk density) and
  - Micro-biological activity etc is not included.
  - Inadequate soil testing infrastructure.

## INITIATIVES TO IMPROVE SOIL HEALTH: –

- ✓ Organic Farming
- ✓ Parampara at Krishi Vikas Yojana
- ✓ Fertilizer Self-Sufficiency
- ✓ Digital Agriculture
- ✓ Carbon Farming
- ✓ The Nutrient Based Subsidy (NBS) Scheme

## FARMER USE A SHC: –

The card will contain an advisory based on the soil nutrient status of a farmer's holding. It will show recommendations on dosage of different nutrients needed. Further, it will advise the farmer on the fertilizers and their quantities he should apply, and also the soil amendments that he should undertake, so as to realize optimal yields.

