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SWASTH DHARA, KHET HARAA, HEALTHY EARTH, GREEN FARM

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Abstract:

In today's scenario, food security is in critical shape, and it will continue to be a global concern for the next 50 years and beyond. We are well aware of the effects of expanding population because we live in a country with a significant absolute rise in population. Because there isn't much space for agricultural land expansion, all of the additional food must come from the land that is already cultivated. This can only be accomplished by introducing agricultural systems and new technologies that raise productivity, resulting in more food and more revenue for farm families. Several additional concerns have emerged over time, drawing attention to food security. Soil health cards are one example of enhanced technology. Soil health cards are helpful in keeping soil fertility and plant nutrient delivery at an optimal level for preserving desired production by maximize the advantages from all potential organic, inorganic and biological components in an integrated manner.

Introduction:

India has used intensive agriculture to achieve significant expansion in food grain output, leading to better seed types, fertilizer and reliable irrigation. The country's current NPK consumption ratio is unbalanced at 8.2:3.2:1, rather than the recommended ratio of 4:2:1. The Government of India began the soil health card scheme on February 19, 2015, with the goal of issuing soil health cards to farmers. It contains crop-specific recommendations for nutrients and fertilizer needed for individual farms, assisting farmers in increasing crop productivity by judicious input utilisation. All soil samples are analyzed in several soil testing facilities across the country to obtain this information. Following that, the specialists will assess the soil's strengths and weaknesses (micronutrient insufficiency) and recommend solutions. The outcome and recommendations will be displayed on cards. The cards would be distributed to 14 crore farmers by the government.

Soil Health Card provides information on the state of soils in terms of 12 characteristics, including N, P, K (Macro-nutrients), S (Secondary-nutrients), Zn, Fe, Cu, Mn, B (Micro-nutrients), pH, Electrical Conductivity, and Organic Carbon (Physical Parameters). It not only tells you how things are going, but it also gives you fertilizer recommendations based on the crops. By maintaining soil health, the Soil Health Card assists farmers in

increasing output. SHC also encourages farmers to use fertilizer wisely, lowering cultivation costs.

Implementing Agency:

The scheme is promoted by the Ministry of Agriculture and Farmers' Welfare's Department of Agriculture and Cooperation. It is being implemented by all state and union territory governments' Departments of Agriculture.

Soil Health Card mobile App:

To assist farmers, the Soil Health Card mobile app has been launched. Field workers will benefit from the app because it will automatically acquire GIS coordinates while recording sample details in the field and indicating the location from which the sample was obtained.

Objectives of Soil Health Card Scheme are as follows:

- I. Every three years, give a soil health card to all farmers in the country, containing all information on nutrient deficits in fertilizing procedures.
- II. To improve the performance of soil testing laboratories (STLs) through capacity building, agriculture student involvement and effective collaboration with the Indian Council of Agricultural Research (ICAR)/State Agricultural Universities (SAUs).
- III. To detect soil fertility limits using uniformly applied standard sample methodologies across all states. In selected districts, evaluating and formulating block level fertilizer requirements.
- IV. To promote and develop soil test-based nutrient management in the area in order to improve nutrient efficiency.
- V. Strengthening the capacity of area employees and progressive farmers to promote nutrient management methods.

Benefits of the Soil Health Card Scheme:

- I. The farmer is capable of determining which crops to cultivate and which to avoid.
- II. The farmer will always have the most up-to-date information on their soil.
- III. Experts will be engaged by the government to assist farmers in implementing the corrective measures.
- IV. The farmer has the ability to prepare for the future of his or her crops and land.
- V. The soil card will inform farmers about which nutrients are deficient in their soil.

As a result, they should consider which crops to invest in. They'll also inform you what fertilizer you'll need. As a result, crop yields will eventually increase.

Conclusion:

Soil testing is an excellent way of finding out how fertile your soil is and how well it can give nutrients. The timely communication of soil test findings to farmers is the most important phase in the entire operation. The importance of speed and reliability of operation cannot be overstated. Appropriate mechanisms and processes should be in place to ensure that the scheme is implemented effectively and that the expected results are achieved. Rather

of preparing training for soil samplers/collectors, soil and water testing should be prioritised. Lab assistants for soil and water testing, as well as lab analysis. Diploma holders in agriculture should receive the training since they already have a basic understanding of the subject and its value, and their services might be used for other agricultural-related tasks during the off-season. As a result, our 'New India' is getting closer to realising the dream of 'Doubling the Farmer's Income.' Soil Health Cards are leading to a new era of healthy soil management in the country, particularly by putting an end to the dangers of overusing urea or nitrogenous fertilizer.

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