



## Awareness about soil health card among the farmers in Saharsa district of Bihar

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### Abstract

Soil health card provide necessary information to farmers about present nutrient status of their soil and recommendations for appropriate doses of different source of nutrient for improving soil health and its fertility. The priority aim is to promote integrated nutrient management for improving soil health and its productivity. An attempt was made to analyse awareness of farmers in utilizing its information. The result showed that majority of the farmers was aware about soil health card and its effectiveness. A proper training of farmers should be done for soil sample collection followed by analysing recommended dose of fertilizers at local level.

**Keywords:** awareness, soil health card, farmers, Bihar

### Introduction

Soil is the key ecosystem function which supports the production of food, forestry products and human health (Lal, 2009) [12]. Healthy soil produces healthy crops that in turn nourish people and animals. The current inherent in soil health reflects the growing awareness that soil is an essential component of the biosphere and its restoration is often the first entry point to increasing the productivity of food increase farmers which also affects global climate. It proposed that soil health is depended on the maintenance of four major functions. Carbon transformation, nutrient cycles, soil structure and maintenance and the regulation of pests and diseases. Non judicious use of fertilizers low addition of organic matter non-replacement of depleted micro and secondary nutrients over the years have resulted in nutrient deficiencies in soil. Knowledge level and adoption of soil fertility management practices are relatively less (Chowdary *et al.*, 2017) [8]. Accurate and systematic soil health management can provide a basis for soil health management. Therefore, soil health card scheme came in existence

To protect soil health and for sustainable agriculture, the government of India launched soil health card (SHC) scheme in February, 2015. A SHC is meant to give each farmer soil nutrient status of his holding and advise him on the dose of fertilizer and micronutrient and also the needed soil amendment that he should apply to maintain soil health in long run. A SHC carries crop wise recommendation of nutrients and fertilizer required for individual farms to help farmers to improved productivity through judicious use of inputs.

The soil health card provides soil health data to get appropriate guidance to the farmers for the efficient use of fertilizers to

cultivable crop based on soil health analysis which is simple documents, contains useful data on soil based on chemical analysis of the soil to describe soil health in terms of its nutrient availability and its physical and chemical properties (Mukati *et al.*, 2018) [9]. The soil health card system brings together the scientific community in the field of agriculture, the information repository of latest tools, techniques and cropping practices, the farmers and the government for the economic upliftment of the people at large (Patel, 2013) [10]. Awareness is the ability of know and perceive to feel or to be conscious of events, objects, thoughts, emotions or secondary pattern. The soil health card scheme in undoubtedly a great initiative that may go a long way to promote soil health but its success shall depend on awareness of farmers regarding the scheme.

So considering all these facts an attempt was made to analyse the awareness in utilizing the information for better use of recommended dose of fertilizers.

### Materials and Methods

The investigation was conducted in Saharsa district of Bihar state which was selected purposively. Total six (06) villages *viz.*, Bara, Barahsher, Gandaul, Padampur, Rakeapatti and Purikh were selected through simple random sampling technique. Thus, total sixty (60) sample respondents were selected. Data was collected using semi structured interview schedule. For measuring awareness data were collected in dichotomous variables, their results were analysed by using frequency and percentage.

**Table 1:** Awareness about Soil Health Card (n = 60)

Sl. No.	Particular	Yes	No
01.	Soil Health card provides information regarding the status of available nutrients in soil	56 (93%)	04 (07%)
02.	Soil health card provides corrective measures a farmer should take for improved soil environment and for better productivity	50 (83%)	10 (17%)
03.	Soil health card helps farmers in reducing extra expenditure by supplying required nutrient in soil	54 (90%)	06 (10%)

04.	Soil health card helps the farmers to get an idea on the crop wise recommendation of nutrients and fertilizers required in each type of soil	50 (83%)	10 (17%)
05.	Soil health card can be helpful and effective only if the recommendations are followed by farmers regulatory	42 (70%)	18 (30%)
06.	The technical information provided in soil health card has been made available in local language	48 (80%)	12 (20%)
07.	Soil health card help in practicing farming in scientific way	50 (83%)	10 (17%)
08.	Soil health card help to check the excessive use of fertilizer	47 (78%)	13 (22%)
09.	Soil health card provides due to health of farm and its strength and weakness in terms of different nutrients and organic carbon status	56 (93%)	04 (07%)
10.	Number of crops increased in one year after soil testing	50 (83%)	10 (17%)
11.	Expenditure of crop production decreases after soil testing	54 (90%)	06 (10%)

## Results and Discussion

It was found that majority of farmers (93%) were aware about the soil health card that provide information about the status of available nutrient in soil. Bordoloi and Das (2017)<sup>[1]</sup> reported that 58.33 per cent of the SHC non-beneficiary farmers had awareness about the soil health card scheme. Kumar *et al.*, 2019<sup>[3]</sup> also reported that majority of the farmers were aware about soil health card use and its effectiveness. This finding is also supported by the results of Niranjana *et al.*, 2018 and Jaiswal and Singh, 2018. Majority of the farmers (83%) agree with the statement that soil health provide corrective measures a farmer should take for improved soil environment and for better productivity. In further investigation, majority of farmers (90%) were aware that soil health card help in reducing extra expenditure by supplying required nutrient status in the soil and majority of the farmers (83%) were aware about that soil health card helps the farmers to get an idea on the crop wise recommendations of nutrients and fertilizers required in each type of soil. Similar findings were also reported by Bunkar (2018)<sup>[3]</sup> and Charel *et al.* (2018)<sup>[4]</sup>. It was observed that most of the farmers (90%) were aware that soil health card provide due to health of farm and its strength and weakness in terms of different nutrients and organic carbon status followed by expenditure of crop production decreases after soil testing (90%), number of crops increased in one year after soil testing (83%) aware and technical information provided in soil health card has been made available in local language (80%). Similarly, soil health card help the farmers to cultivate the crop in more scientific way by adopting recommended dose of fertilizers and required input in particular field. Bhayal *et al.* (2019)<sup>[2]</sup> reported that the majority of beneficiaries were found to have medium level of awareness about various component of soil health card. About 73 per cent non-beneficiaries were aware about balanced application of chemical fertilizers under soil health card (Kaur *et al.*, 2019)<sup>[5]</sup>.

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