

Original Research Article

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Awareness and Perception of Farmers towards Soil Health Card Scheme in Rayalaseema Region of Andhra Pradesh, India

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ABSTRACT

The basic objective of soil testing programme is to give farmers a service leading to better and more economic use of fertilizers and soil management practices for increasing agricultural production. Now a day's consumption of fertilizer by farmer is higher than actual requirement. The farmers do not follow the soil testing technique. Soil test based nutrient management has emerged as a key issue in efforts to increase agricultural productivity and production since optimal use of nutrients, based on soil analysis can improve crop productivity and minimize wastage of these nutrients, thus minimizing impact on environmental leading to bias through optimal production. Governments do efforts towards these through Soil Health Cards. The above study was conducted in Anantapuramu district of Andhra Pradesh. Six mandals were selected for the study. From each mandal two villages were selected and from each village 20 SHC beneficiaries were selected thus comprising 240 respondents for the study. The data were collected with help of well-structured interview schedule following personal interview methods. The data revealed that major constraints faced by SHC beneficiaries in utilizing the soil health card were, Difficulty in calculating fertilizer dose on the basis of nutrient status of soil (85.84%), receiving soil health cards after crop harvest (82.51%), time gap between soil samples taken and issuing cards is too high (79.17%), and collection of soil sample was not done in presence of farmers (72.92%).

Keywords

Perception,
Farmers, Soil
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Introduction

Agriculture is the backbone of Indian economy. Progress of India is very much dependent on the development of agriculture. The increased agricultural production depends upon number of factors of which soil fertility plays an important role. Soil fertility is identified by the nutrient status of the soil. Soil fertility is identified by the nutrient status of the soil. Soil testing has been used by soil

scientist as an aid in determining soil fertility level. Yadav *et al.*, (2006) stated that soil testing has exposed some information about the accurate amount of nutrients of special kinds of plants and also other information such as acid and saline-alkali soil.

The basic objective of soil testing programme is to give farmers a service leading to better and more economic use of fertilizers and soil management practices for increasing

agricultural production. Now a day consumption of fertilizer by farmer is higher than actual requirement. The farmers do not follow the soil testing technique. Hence to reduce the over consumption of fertilizers and follow the soil test based recommendation for applying fertilizers government has launched soil health card scheme in February 2015. Soil Health Card is one of the important approaches in agriculture because it is key elements for the sustainable production is soil which serves as a natural nutrient source for growth of plants.

A SHC is meant to give each farmer soil nutrient status of his holding and advise him on the dosage of fertilizers and micronutrient and also the needed soil amendments that he should apply to maintain soil health in the long run. The scheme is considered as a holistic measure for soil health and farm economy. A SHC carries crop wise recommendation of nutrients and fertilizer required for the individual farms to help farmers to improve productivity through judicious use of inputs. In this programme, technical guidelines are given on how to collect the soil samples and where to test it. The job of soil testing is done in soil testing labs & mini kit at KVKs across the country. The experts in this line will analyze the strength and weakness (micro-nutrient deficiency) of the soil and suggest measure to deal with and the concerned department will distribute the cards among farmers of each state. In the guidelines, there is also an instruction to devise a mechanism to issue SHC every 3 years in respect of all holdings in order to capture the soil fertility changes occurring due to plant uptake or other natural causes. Awareness on SHC by conducting meetings, trainings, group discussions, exhibition and demonstrations at village level based on the importance of SHC. The present study throws a light on awareness, perception and constraints faced by the farmers in

adoption of soil test techniques and its recommendations.

Materials and Methods

The present study was conducted in Rayalaseema region of Andhra Pradesh state. Anantapuramu district was selected for the study because there exists diversified crops which require different types of soils. Six mandals from Anantapuramu district were selected randomly by following lottery method of simple random sampling. Ten mandals with highest number of soil health card holders were selected and from ten mandals six mandals namely Raptadu, Kanekal, Tadipatri, Gudibanda, Dharmavaram, Gorantla were selected randomly by following lottery method of sampling. Two villages were selected from each of the 6 mandals by following simple random sampling thus making a total of 12 villages. From each village, 20 farmers were selected by following simple random sampling procedure, thus making a total of 240 respondents who were having soil health cards had been selected for the study.

The data were collected through personal interview method with the help of pre-structured scheduled designed with the objective finding out awareness level & perception regarding utility of SHC and to analyze the constraints and suggestions expressed by farmers in utilization of SHC. The data collected was subjected to suitable technique of analysis by regression.

Results and Discussion

The data related to constraints faced by the respondents are presented in table 1 and ranked as I) Difficult to calculate fertilizer dose on the basis of nutrient status of soil (85.84%). II) Received soil health cards after crop harvest (82.51%). III) Time gap between

soil samples taken and issuing cards is too high (79.17%). IV) Collection of soil sample was not done in presence of farmers (72.92%). V) Lack of technical advice on method and time of fertilizer application (69.59%). VI) Recommended fertilizers not available in adequate quantity in local market (63.34%). VII) Soil testing labs are located far away (54.59%). VIII) High price of fertilizers (52.92%). IX) Doubt on the quality and reliability of the information provided in the SHC (46.67%). X) Lack of training (37.50%).

XI) Unable to operate internet (access to soil health card portal) (34.59%). XII) Irregularity of extension services (30.84%). Thus, it can be concluded that major constraints faced by the SHC holders about Soil Health Card were Difficult to calculate fertilizer dose on the basis of nutrient status of soil followed by Received soil health cards after crop harvest followed by Time gap between soil samples taken and issuing cards is too high and Collection of soil sample was not done in presence of farmers.

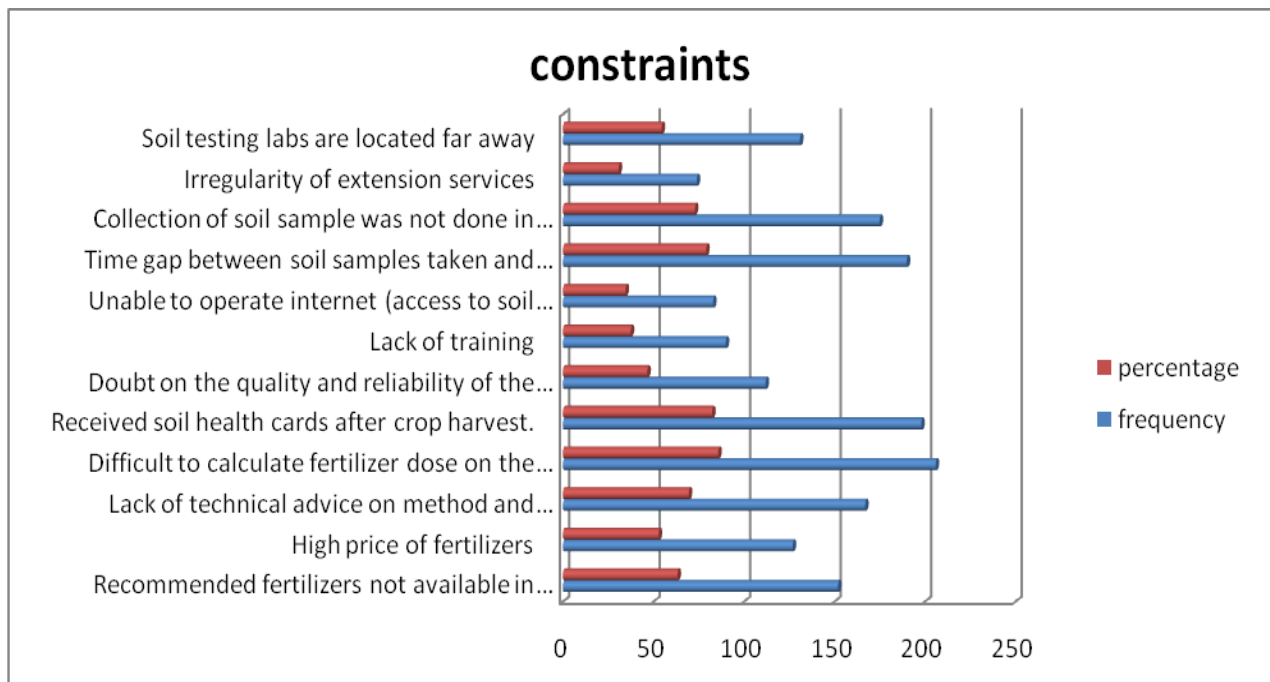
State	District	Mandals	Villages	Respondents
Andhra Pradesh	Anantapuramu	Raptadu	Bommaparthu	20
			Hampapuram	20
		Kaneikal	Kaneikal	20
			Ganigera	20
		Tadipatri	Peddapolamada	20
			Alur	20
		Gudibanda	Muthukuru	20
			Morubagal	20
		Dharmavaram	Kunuthuru	20
			Chigicherla	20
		Gorantla	Gowrivaripalle	20
			Vanavolu	20
Total	1	6	12	240

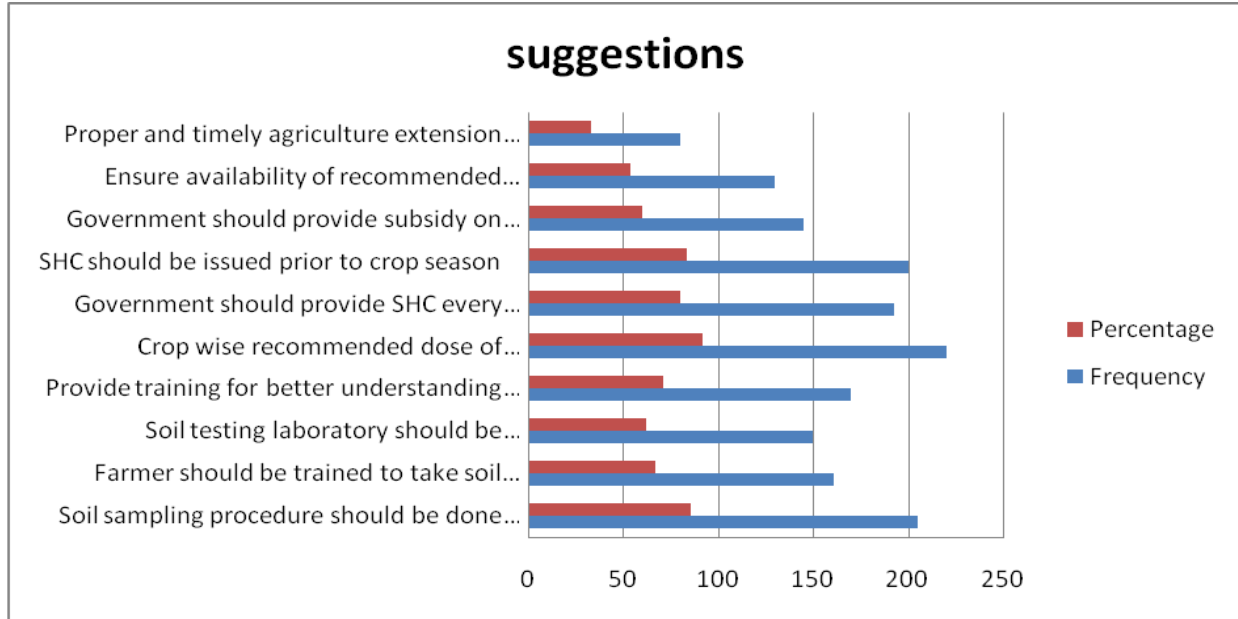
Table.1 Distribution of the SHC holders according to the constraints faced by them in using Soil health card

S. No	Constraints	Frequency	Percentage	Rank
1	Recommended fertilizers not available in adequate quantity in local market	152	63.34	VI
2	High price of fertilizers	127	52.92	VIII
3	Lack of technical advice on method and time of fertilizer application	167	69.59	V
4	Difficult to calculate fertilizer dose on the basis of nutrient status of soil	206	85.84	I
5	Received soil health cards after crop harvest.	198	82.51	II
6	Doubt on the quality and reliability of the information provided in the SHC	112	46.67	IX
7	Lack of training	90	37.50	X
8	Unable to operate internet (access to soil health card portal)	83	34.59	XI
9	Time gap between soil samples taken and issuing cards is too high	190	79.17	III
10	Collection of soil sample was not done in presence of farmers	175	72.92	IV
11	Irregularity of extension services	74	30.84	XII
12	Soil testing labs are located far away	131	54.59	VII

Table.2 Distribution of the SHC holders according to the suggestions offered by them in using Soil health card

S.No	Suggestion	Frequency	Percentage	Rank
1	Soil sampling procedure should be done in presence of farmer	205	85.42	II
2	Farmer should be trained to take soil sample of his own soil	161	67.08	VI
3	Soil testing laboratory should be established at taluka level with highly qualified staff	150	62.50	VII
4	Provide training for better understanding about content of Soil Health Cards	170	70.83	V
5	Crop wise recommended dose of fertilizer should be given in SHC	220	91.67	I
6	Government should provide SHC every year to each farmer.	193	80.42	IV
7	SHC should be issued prior to crop season	200	83.34	III
8	Government should provide subsidy on inputs used by farmers	145	60.42	VIII
9	Ensure availability of recommended fertilizers in the market	130	54.17	IX
10	Proper and timely agriculture extension services	80	33.33	X





The data related to suggestions given by the respondents are presented in table 2 and ranked as I) Crop wise recommended dose of fertilizer should be given in the SHC (91.67%), II) Soil sampling procedure should be done in presence of farmer (85.42%), III) SHC should be issued prior to crop season (83.34%), IV) SHC should be issued prior to crop season (80.42%), V) Provide training for better understanding about content of Soil Health Cards (70.83%), VI) Farmer should be trained to take soil sample of his own soil (67.08%), VII) Soil testing laboratory should be established at taluka level with highly qualified staff (62.50%), VIII) Government should provide subsidy on inputs used by farmers (60.42%), IX) Ensure availability of recommended fertilizers in the market (54.17%) and X) Proper and timely agriculture extension services (33.33%).

An outlook of the constraints and suggestions elicited by respondents gives an idea that major constraints faced by the SHC holders about Soil

Health Card were difficult to calculate fertilizer dose on the basis of nutrient status of soil followed by time gap between soil samples taken and issuing cards is too high. Majority of the farmers had suggested that there should be provision of crop wise recommended dose of fertilizer should be given in Soil Health Card. Timely availability of Soil Health Card to the farmers. An understanding of the perception of farmers and description of constraints faced by the respondents may serve as a feedback to the planners, policy makers, extension personnel, scientist and development agencies to make suitable strategy in implementation of the scheme.

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