Available online at www.ijpab.com

DOI: http://dx.doi.org/10.18782/2582-2845.8782

ISSN: 2582 – 2845

Ind. J. Pure App. Biosci. (2021) *9*(5), 33-39

Indian Journal of Pure & Applied Biosciences

Peer-Reviewed, Refereed, Open Access Journal

Research Article

A Study on Awareness and Opinion of Farmers Regarding Soil Health Card Scheme in District Kanpur Nagar (U.P.)

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Received: 8.08.2021 | Revised: 26.09.2021 | Accepted: 3.10.2021

ABSTRACT

Soil is one of the most important elements required for farming as it provides nutrients to the plant. Soil is the organic and inorganic materials on the surface of the earth that provides the medium for plant growth. It is the mixture of minerals, organic matter, gases, liquids, and the countless organisms that together support life on earth. Soil Health card scheme provides a qualitative assessment of soil health and reclamation measures to the problematic soil. It is a government of India's scheme promoted by the department of agriculture and co-operation under the ministry of agriculture in all the state and union territories. Prime-minister Narendra Modi launched the soil health card scheme in Suratgarh town of Shri Ganganagar District of Rajasthan on 19 February 2015. Under the scheme, govt. plans to issue soil health cards to the farmers which will carry crop wise recommendations of nutrients and fertilizers required for the individual farms to help farmers to improve productivity through judicious use of inputs.

It was found that the majority of respondents were fully aware about recommended dose of fertilizer needed for crops depending upon major soil nutrients, place from where sol health card can be collected and the availability of information related to soil moisture, temperature and pH on soil health card.

Keywords: *Assessment, Inorganic, Nutrients, Organic, Reclamation, Soil.*

INTRODUCTION

Soil is one of the elements required for farming as it provides nutrients to the plant. Healthy soil containing all the elements for growth and development of crop and on the other hand soil deprived of one or more elements either reduces production or degrades quality of crops.

Cite this article: Verma, C., Gupta, S., Verma, M., & Kumar, A. (2021). A Study on Awareness and Opinion of Farmers Regarding Soil Health Card Scheme in district Kanpur Nagar (U.P.), *Ind. J. Pure App. Biosci. 9*(5), 33-39. doi: http://dx.doi.org/10.18782/2582-2845.8782

Prime-minister Narendra Modi launched the soil health card scheme in Suratgarh town of Shri Ganganagar District of Rajasthan on 19 February 2015. Under the scheme, the government plans to issue soil cards to farmers which will carry crop-wise recommendations of nutrients and fertilizers required for the individual farms to help farmers to improve productivity through judicious use of inputs. On 5th December 2015 the ministry of agriculture introduced the soil health card (SHC) scheme. All soil samples are to be tested in various soil testing labs across the country. Thereafter the experts will analyze the strength and weaknesses (micro-nutrients deficiency) of the soil and suggest measures to deal with it. The result and suggestion will be displayed in the cards. The government plans to issue the cards to 14 crore farmers.

Soil Health Card Scheme is a very beneficial scheme for farmers. There are many farmers in India. And they do not know which types of crops they should grow to get maximum yield. Basically, they do not know the quality and the type of their soil. They might know by experience what crops grow and what crops fail. But they don't know what they can do to improve the condition of the soil. A step-by-step process for leading farmers in identifying soil health indicators and developing a Soil Health Card. The farmers will be notified about the soil type and they can plant crops accordingly. The authorities provide a report to the farmers once in 3 years after observing the soil regularly. This makes the farmers not to be concerned about the cultivation even if the soil changes due to natural factors.

The Government sees that the same person is carrying out all the soil analysis so that there can be further changes that can be made if required.

The farmers will be informed about the needed nutrients in the soil.

Objective of the study

To know the awareness of farmers regarding soil health card scheme.

MATERIALS AND METHODS

The present study was undertaken during 2020-2021 in the Kalyanpur and Chaubeypur blocks of Kanpur. In each block, 3 villages were purposely selected. From each list 25 respondents were selected randomly. Thus in all, 150 respondents were selected for the study purpose. The statistical tools were used as percentage, weighted mean, standard deviation, rank order and correlation coefficient etc.

RESULT AND DISCUSSION

Education

Table 1: Distribution of respondents according to educational qualification

Education	Frequency	Per cent
Illiterate	53	35.3
Up to primary	31	20.7
High school	22	14.7
Intermediate	38	25.3
Graduate and above	6	4.0
Total	150	100.0

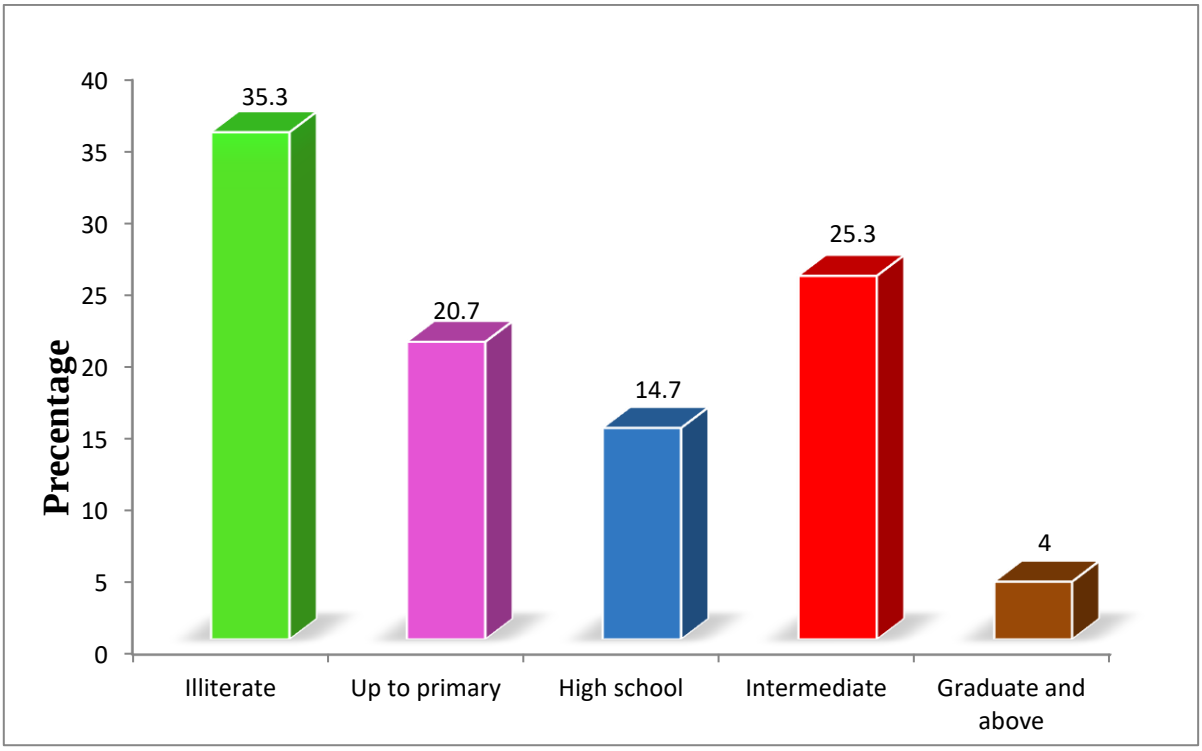


Fig. 1: Distribution of respondents according to educational qualification

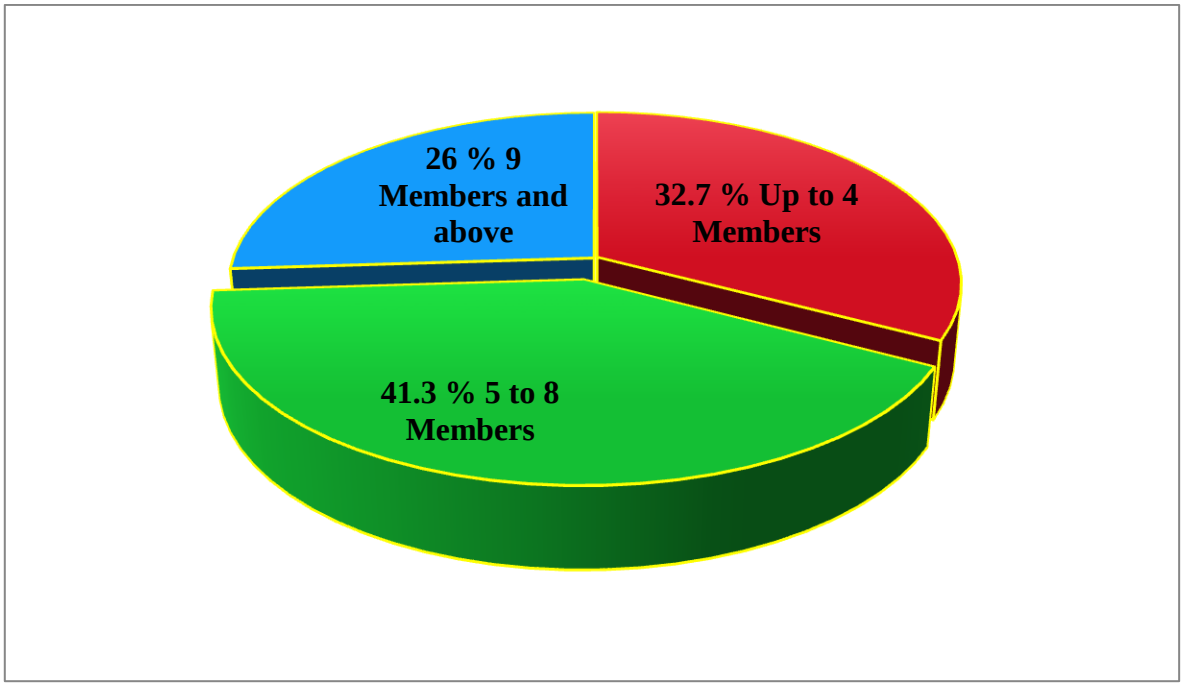
The data presented in table shows the distribution of respondents according to educational qualification, 35.3% of respondents were illiterate followed by 25.3% of respondents who were found to educate up to Intermediate in the research study area. 20.7 % respondents were found educated up to primary level in the research study area. 14.7% of respondents were educated up to high school and only 4.0 % respondents were educated up to graduation and above level in the study area.

The findings reveal that most of respondents in the study area were illiterate. The above result is broadly supported by Panda, C. K., & Singh, S. R. (2015).

Size of family

Table no 2. Distribution of respondents according to size of family

Size of family	Frequency	Per cent	Mean size (n)	SD (n)
Up to 4 members	49	32.7	3	1
5 to 8 members	62	41.3	6	1
9 members and above	39	26.0	11	1
Total	150	100.0	6	3



Size of family Fig. 2 Distribution of respondents according to size of family

The perusal of Table shows the distribution of farmers according to size of the family 41.3 % respondents had up to 5 to 8 members in their family with mean size of family as 6 members and standard deviation of 1, while 32.7 % respondents had 4 members in their family with mean 3 and standard deviation 1. Only 26.0 % of respondents belonged to the family with 9 members and above with mean size 11 and standard deviation 1 in the research study area. Similar findings were also reported by Bordoloi, J., & Das, A. K. (2017).

Awareness of farmers regarding soil health card scheme

Table 3: Distribution of respondents according to awareness of farmers regarding soil health card scheme

N=150

S. No.	Awareness	Symbol	Fully aware	Partially aware	Unaware	Mean Score	S.D.	Rank
1.	How soil sample is to be taken?	A	14.7	50.0	35.3	1.79	1.37	VI
2.	Do you know which types of precaution are to be taken while taking soil sample?	B	16.0	44.7	39.3	1.77	1.36	VII
3.	Website provides details about soil health card.	C	12.7	42.7	44.7	1.68	1.27	IX
4.	Do you know that soil health card provides Integrated Fertilizer Management based cropping system?	D	12.7	38.7	48.7	1.64	1.24	XII
5.	Farmers can get information about soil type from the computer provided under e-village project to Gram Panchayat.	E	12.7	38.7	48.7	1.64	1.24	XII
6.	There is a provision of different nutrient status of each farm by analyzing their soil sample.	F	12.7	42.0	45.3	1.67	1.26	X
7.	Among these macro nutrients Nitrogen, Phosphorous and Potash status is displayed in soil health card.	G	18.7	36.7	44.7	1.74	1.36	VII
8.	Among these micro nutrients Magnesium, Zinc, Maganese, Iron, cobalt, Boron, Calcium status is displayed in soil health card.	H	20.0	34.7	45.3	1.75	1.38	V
9.	Soil health card scheme is useful for knowing physical & chemical properties of soil.	I	14.7	42.0	43.3	1.71	1.31	VIII
10.	Soil health card provides information about soil temperature.	J	18.0	44.7	37.3	1.81	1.40	IV
11.	Soil health card provide information about available soil moisture.	K	20.7	42.0	37.3	1.83	1.44	III
12.	Soil health card provide information about Electric Conductivity and pH of soil.	L	10.7	46.7	42.7	1.68	1.25	XI
13.	Whether any method is provided to calculate dose of fertilizer from the available nutrients?	M	15.3	47.3	37.3	1.78	1.37	VI
14.	Depending upon availability of major nutrients in the soil, recommended dose of fertilizer for crops are given in soil health card.	N	27.3	39.3	33.3	1.94	1.56	I
15.	From where Soil Health Cards can be collected.	O	21.3	48.0	30.7	1.91	1.50	II

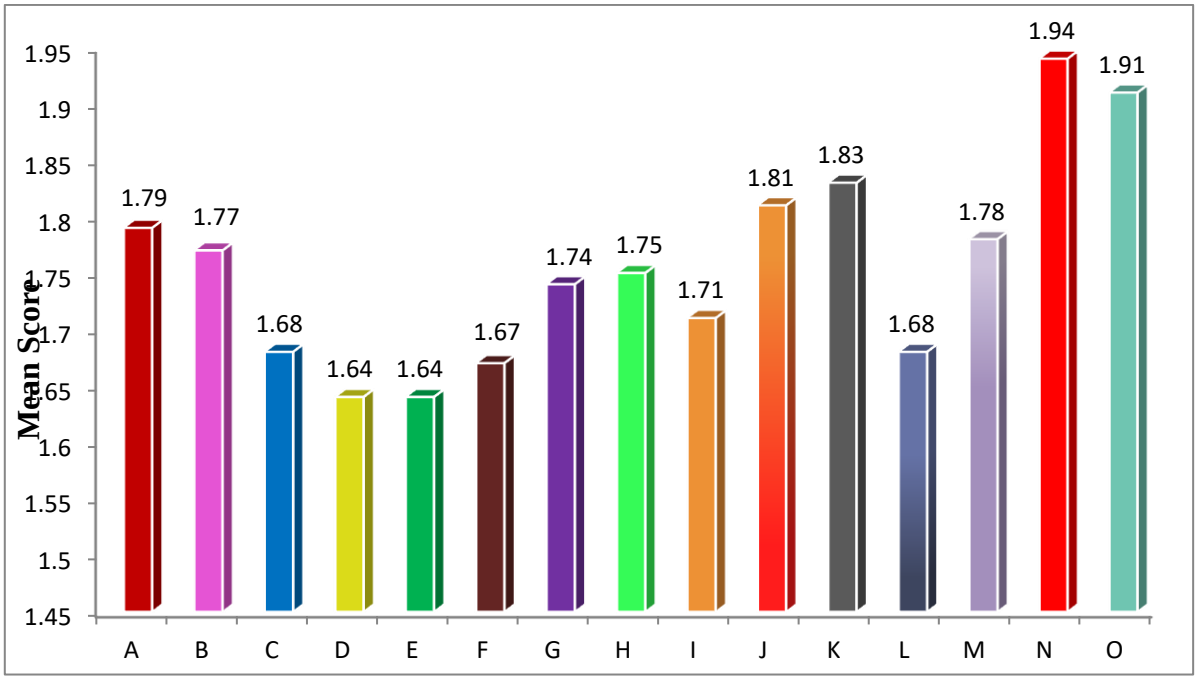


Fig. 3: Distribution of respondents according to awareness of farmers regarding soil health card scheme

The data shown in the table indicates the awareness of farmers regarding soil health card scheme, 27.3 % respondents were fully aware and 39.3 % of respondents were partially aware that depending upon availability of major nutrients in the soil, recommended dose of fertilizer which crops are given is mentioned in soil health card with mean score 1.94 %, standard deviation 1.56 % and rank I followed by 21.3 % farmers who were fully aware and 48.0 % of respondents who were partially aware that from where soil health card can be collected with mean score 1.91, standard deviation 1.50 and rank II in the study area. 20.7 % respondents were fully aware and 42.0 % of them were partially aware that soil health card provide information about available soil moisture with mean score 1.83, standard deviation 1.44 and rank III, while 18.0 % respondents were fully and 44.7 % of them were partially aware that soil health card provides information about soil temperature with mean score 1.81, standard deviation 1.40 and rank IV. 20.0 % respondents were fully aware and 34.7 % of them were partially aware that among these micro nutrients Magnesium, zinc, maganese, iron, cobalt, boron, calcium status are displayed in soil health card with mean score 1.75, standard deviation 1.38 and rank V. Further 14.7 % and 15.3 % of farmers were fully aware about how soil sample is to be taken and whether any method is provided to calculate dose of fertilizer from the available nutrients with mean score 1.79 and 1.78 respectively standard deviation 1.37 and rank VI. 16.0 % and 18.7 % respondents are fully aware about types of precaution needed while taking soil sample and macro nutrients nitrogen, phosphorous, and potosh status are displayed in soil health card with mean score 1.77 and 1.74 respectively standard deviation 1.36 and rank VII. While 14.7 % respondents were fully aware and 42.0 % of farmers were partially aware that soil health card scheme is useful for knowing physical and chemical properties of soil with mean score 1.71, standard deviation 1.31 and rank VIII. 12.7 % farmers were fully and 42.7 % of them partially aware that website provides details about soil health card with mean score 1.68, standard deviation 1.27 and rank IX. Further 12.7 % respondents were fully aware and 42.0 % of respondents were partially aware that there is provision of different nutrient status of each farm by analyzing their soil sample with mean score 1.67, standard deviation 1.26 and rank X. 10.7 % respondents were fully aware

and 46.7 % of them were partially aware that soil health card provides information about electric conductivity and pH of soil with mean score 1.68, standard deviation 1.25 and rank XI. While 12.7 % respondents are fully aware that soil health card provides Integrated Fertilizer Management based cropping system and Farmers can get information about soil type from the computer provided under e-village project to Gram Panchayat with mean score 1.64, standard deviation 1.24 and rank XII.

So, it is concluded that most of respondents were aware that depending upon availability of major nutrients in the soil, recommended dose of fertilizer can be given which crops are mentioned given in soil health card and similar results were also revealed by Kumar, S., Kale, P. A., & Thombare, P. B. (2019).

CONCLUSION

It was found that the majority of respondents were fully aware about recommended dose of fertilizer needed for crops depending upon major soil nutrients, place from where sol health card can be collected and the availability of information related to soil moisture, temperature and pH on soil health card.

RECOMMENDATIONS AND SUGGESTATIONS

1. The study was carried out under certain limitations of time and resources available with researcher, covering Kanpur district of Uttar Pradesh. It is true that a finding of single study is not adequate to make any generalized conclusion. Therefore, it is necessary to replicate the same study in other districts of the state also.
2. Some other personal, social, economically, communicational and psychological characteristics other than those included in this study must be taken into consideration which might affect efficiency use of soil health card.
3. The area of research may be extended further and sufficiently a large number of farmers should be studied to draw valid and general conclusions.

REFERENCES

Bhatt, P. M., Patel, H. B., & Patel, B. M. (2009). A study on awareness about soil health card *Guj. J. Extn. Edu. 20*(21), 53-54.

Bone, J., Barraclough, D., Eggleton, P., Head, M., Jones, D. T., & Voulvoulis, N. (2014). Prioritising soil quality assessment through the screening of sites: the use of publicly collected data. *Land Degradation & Development*, *25*(3), 251-266.

Charan, E. S., Rani, V. S., Rao, I. S., & Padmaja, B. (2019). Feasibility of soil health cards in terms of its attributes as perceived by the farmer. *Journal of Pharmacognosy and Phytochemistry*, *8*(3), 4690-4694.

Cowie, J., Cairns, D., Blunn, M., Wilson, C., Pollard, E., & Davidson, D. (2009). A mobile knowledge management and decision support tool for soil analysis. *International Journal of Information Management*, *29*(5), 397-406.

Cui, J., Askari, M. S., & Holden, N. M. (2014). Visual evaluation of soil structure under grassland management. *Soil Use and Management*, *30*(1), 129-138.

Grover, D. K., Singh, J. M., & Singh, J. (2016). Soil test-based fertilizer usage: a step towards sustainable agriculture in Punjab. *Indian Journal of Economics and Development*, *12*(1a), 493-500.

Lohakare, A. C., Gawande, S. H., Khandait, V. N., & Basunathe, V. K. (2013). Socio-economic, psychological characteristics of the cattle owners and their relationship with adoption of animal husbandry practices in Vidarbha region of Maharashtra. *Res. J. Agril. Sci., 4*(3), 359-362.

Patel, G. G., Lakum, Y. C., Mishra, A., & Bhatt, J. H. (2017). Awareness and Knowledge Regarding Soil Testing and Utility Perception of Soil Health

Card. *International Journal of Current Microbiology and Applied Sciences 6*(10), 329-334.

Patel, A. (2016). Addressing soil health management issues in India. *International Journal of Research-Granthaalayah*, *4*(12), 110-123.

Sanchez, P. A., Denning, G. L., & Nziguheba, G. (2009). The African green revolution moves forward. *Food Security*, *1*(1), 37-44.

Shinde, M., Ekbote, K., Ghorpade, S., Pawar, S., & Mone, S. (2016). Crop recommendation and fertilizer purchase system. *International Journal of Computer Science and Information Technologies, 7*(2), 665-667.