Association of socio-economic profile of farmers with perception towards soil health card in SurajpurDistrict(C.G.)

Abstract:

Soil test based nutrient management has emerged as a key issue in efforts to increase agricultural productivity and production. The optimal use of nutrients, based on soil analysis, can improve crop productivity and minimize nutrient waste, thus minimizing impact on the environment. The study was conducted in SurajpurDistrict of Chhattisgarh, with120respondents.The finding indicated that majority of farmers had a high perception level 40precent followed by medium35precentandonly 25precentfarmer hadlowperception level. Education, Farming experience, land holding, Annual Income, Extension Contact, Mass Media Exposure, Scientific Orientation and Innovativeness were significantly related and age, Occupation, social participation were found nonsignificantly relationship with perception level.

Keywords: *Soil thealthcard,perception level.*

Introduction-

The greatest number of the rural people will remain engaged in agriculture as their primary occupation for a very long time. While we have implemented the Green Revolution, the nation's expanding population need even greater efforts in the areas of research, education, and extension. Because there are so many productive technologies accessible across the nation, it is crucial for extension agents to understand how farmers feel about the technologies before they are adopted.Nutrient imbalance in the soil, excessive fertilisation, soil pollution, and processes that lead to soil loss are all factors that have a negative impact on the health and quality of the soil. Although the producing function of soil has long been understood, it has only recently become important to preserve and improve the ecological services that soil provides.Soil health card is a printed report that will be given to a farmer for each of his holdingsıIt will show his soil's status according to 12 parameters: N, P, K (macronutrients) and S (secondary nutrients), Zn, Fe, Cu, Mn, and Bo are micronutrients and pH, EC andOC (Physical parameters). Based on this, the SHC will also recommend fertilizers and soil amendments that the farm needs.The Soil Health Card will provide a suggestion on the recommended dosage of various nutrients depending on the soil nutrient status of the farmer's holding. Soil health card is one of the most crucial approaches in agriculture because it is essential for sustainable production.

Methodology-

The study was carried out inSurajpur district (C.G.),2022-23.There are six total blocks in the Surajpur district. Out ofwhich, 2 blocks were purposely selected. From eachblock, 4 villages, total 8 villages were selected.From each village, 15 farmers total 120 respondentspurposely selected. The researcher personally gathered the data using a

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Comment [WU2]: Which nutrients? Major or micro? Out of which the critical one under discussion?

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Comment [WU4]: What is the status of Chhatisgarh?

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structured and personal interview schedule.Analyse and understand the data, percentages, frequency and correlation coefficient were used.

Result and Discussion: -

Table no. 1 Distribution of respondents according to Levelofperceptionoffarmersaboutsoilhealthcard.(n=120)

S. No.	Parameters	A		UD		DA	
		F	%	F	%	F	%
1	Soiltestresultsgivethesoilhealthinformation.	59	49.17	39	32.50	22	18.33
2	SHCrecommendationhelpsin scientificfarming	45	37.50	48	40	27	22.50
3	Soilfertilityincreasesthe crop productionandproductivity.	68	56.67	34	28.33	18	15.00
4	Quantityoffertilizercanbeeasily calculatedbyusingSHC	41	34.16	47	39.17	32	26.67
5	SHC reduces the excess coston fertilizersandnutrients	47	39.17	41	34.16	32	26.67
6	Soil test result is not usefulforconvertingfallowlandtocultivableland	45	37.50	43	35.83	32	26.67
7	Therequiredquantityofmacroandmicronutrients canbeappliedbysoil testresults.	12	10.00	38	31.67	70	58.33
8	SecondarynutrientgivenintheSHCisnotmuchusefultofarmers.	59	73.75	16	20.00	5	6.25
9	Amendments are useforsoilreclamation.	41	34.17	39	32.50	40	33.33
10	SHChelpsustoestablishcoordinationamongfarmers,extensionworkersandscientists.	57	47.50	40	33.33	23	19.17
11	SHCgivescropwiserecommendationoffertilizers&nutrients	23	19.17	59	49.16	38	31.67
12	Soildegradationcannotbereduced fromsoil testresults	42	35.00	42	35.00	36	30.00
13	Soiltestingshould bedoneeveryyear	41	34.17	39	32.50	40	33.33
14	SHC information helps to adoptsuitablecropplan.	42	35.00	38	31.67	40	33.33
15	SoilpHgivesacidity&alkalinityofsoil.	36	45	27	33.75	17	21.25
16	Soiltestresultdoesnotgiveideatochoosetheincomegenerating crops.	69	57.50	34	28.33	17	14.17
17	Salinitythesoilisknownbyelectricalconductivity(EC)value.	22	18.33	51	42.50	47	39.17
18	Farmers cannot achieveeconomicstability by SHC	68	56.67	30	25.00	22	18.33
19	Basedonsoiltestresultsfarmerscanplanthefutureoftheircropsaswellasland.	58	48.33	44	36.67	18	15.00
20	SHCisnotnecessaryforpracticingAgriculture	39	32.50	43	35.83	38	31.67

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Table 1. indicated that the majority 49.17 per cent of the respondents had agreed with statement that soil health card can be obtained after the soil sample testing,followed by 32.50 per undecided and 18.33 per cent had disagreed with the statement.Most of farmer 40 percent undecided with the statement that farming cannot be done inscientific ways by using soil health card information, followed by the 37.50 per cent agreed and 22.50 per cent had disagreed. More than half 56.67 per cent agreed with statement that SHC help to maintain soil fertility andproductivity, followed by 28.33 per cent undecided and 15.00 percent had disagreed. Majority of farmer 39.17 per cent had undecidedwith the statement that SHC provides information about current fertility status of soil,followed by the majority 34.16 per cent agreed and 26.67 percenthaddisagreed. Most of farmers 42.20 per cent undecided withstatementthatSHCreduces the excess cost on fertilizers & nutrient,followedby 39.17percentagreed and 18.33 per centhaddisagreed with thestatement. Majority of farmer 37.50 per cent agreedwithstatementthat soil test result not useful for converting fallow land,followedby 35.83percentundecided and26.67percentdisagreed. Majority of farmer 58.33 per cent disagreedwithstatementthat quantity of macro and micronutrient applied soil test, followed by 31.67 per cent undecidedand 10 per cent agreed. Most of farmers 49.7 per cent agreedwithstatementthatsecondary nutrient not much useful to farmersfollowedby 35.33percentundecidedand15percentdisagreed. Out of total farmers 34.17 per cent agreedwithstatementthat amendments are used for soil reclamation,followedby33.33percentdisagreedand 32.50 percentundecided. Majority of farmers 47.50 per cent agreedwithstatementthatSHChelptoestablish,coordinationamongfarmers,extensionworkerandexperts,followedby 33.33percenthad undecidedand19.17percentdisagree.Most of farmers 49.16 per cent had undecided withstatementthatSHCgives cropamountoffertilizertobeapplied,followed by 31.67 per cent disagreed, 19.17 per cent undecided and 5.83 per centdisagreewith the.35.00 per cent of the respondents hadagreed& undecided withstatementthatSHCgivesinformationaboutamountoffertilizertobeapplied,followed by 30.00 per cent disagreed. Majority of farmer 34.17percentoftherespondentshadagreed with statement that soil testing should by every year, followed by 33.33 per cent disagreedand 32.50 percent undecided with thestatement. Most of farmer 35.00 per centof therespondents hadagreedwithstatementthat information helps to adopt suitable crop plan giveninSHC,followedby33.33percentofthesoilhealthcardholdershad disagreedand31.67percentofthe soilhealth cardholdershad undecided with thestatement. Mostly farmer 45 per centoftherespondents hadagreedwithstatementthatAcidity,alkalinity ofthesoilscanbeknownwiththehelpofSHCinformation,followedby 33.75 percenthad undecided and21.25percentdisagreed. Majority of farmer 57.50percentagreedwithstatementthatSoil test result doesn't choose the income generating crop,followedby 28.33 per cent had undecided and 14.17 per cent disagreed.Most of farmer42.50percentoftherespondentshad undecidedwithstatementthatSoil is known by EC value,followedby 39.17 per cent of the soil health card holders had disagreed and 18.33 per cent of the soil health cardholdershad agreed with the statement. Most of farmer 56.67percentagreedwithstatementthatcannot achieve economic stability by SHC,followedby 25.00 per cent had undecided and 18.33 per cent disagreed.Majority of farmers 48.33percent had agreedwithstatementthat farmers canplan future their crops as well as land,followedby 36.67 per cent undecided and 15.00 per centdisagreed.in

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this table shows majority of farmer 40.00percentoftherespondentshad agreedwithstatementthatgive a clear idea nutrient the soil is lacking,followedby 37.50 per cent undecided and 22.50 per cent of the soil health cardholdershad disagreed with the statement.

Table no. 2. Respondents were divided into groups based on their perception level. (n=120)

S. No.	Category	Frequency	Percentage
1	Low perception level (Up to 20 score)	30	25.00
2	Medium perception level (21 to 40 score)	42	35.00
3	High perception level (Above 40 score)	48	40.00
	Total	120	100.00

To measure the perceived perception level of farmerwere asked to rate the agreement on three-point continuum i.e., low perception level,medium perception leveland high perception level.Table no.2 evince that maximum number of respondent 40 percent were having high perception level followed by medium perception level35percent and only 25percent respondents had lowperception level.

Table no. 3. Association between socio-economic profile of farmerand their perception level.

S.No.	Characteristics	Correlation coefficient
1	Age	0.108^{NS}
2	Education	0.216*
3	Farming Experience	0.229*
4	Land Holding	0.300^{**}
5	Occupation	0.095^{NS}
6	Annual income	0.434**
7	Social Participation	0.084^{NS}
8	Extension Contact	0.261**
9	Mass Media Exposure	0.232*
10	Scientific Orientation	0.655**
11	Innovativeness	0.229*

***** Indicate that .05% level of significance
****** Indicate that .01% level of significance
NSindicate that non-significant

Table No.3.concluded that correlation of all the selected independent variables with perception of SHC showed non-significant with age (0.108^{NS}) , Occupation (0.095^{NS}), social participation (0.084^{NS}) However, Education (0.216*), Farming experience (0.229*) , land holding (0.300**), Annual Income (0.434**), Extension Contact (0.261**), Mass Media Exposure (0.232*), Scientific Orientation (0.65**) and Innovativeness (0.229*) depicts positive significant correlation.

Conclusions: -

It wasconcluded that, Education, Farming experience, land holding, Annual Income, Extension Contact, Mass Media Exposure, Scientific Orientation and Innovativeness were significantly related and age, Occupation, social participation were found nonsignificantly relationship with perception level. Among perception level, most of respondent had high perception level towards soil health card.

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