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Study on awareness & perception regarding soil health card

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Abstract
The study was conducted in Burhanpur district of M.P. during the year 2016-2018. Four villages of Burhanpur block were selected for the study. 30 respondents from each village and totally 120 respondents were selected randomly from the four villages. The data were collected through personal interview method with the help of pre-structured scheduled designed with the objective of finding out awareness level & perception regarding utility of soil health card and to analyze the constraints expressed by farmers in utilization of soil health card. The study revealed that the perception of farmers of the relevance of technologies i.e. SHC was not only affected by the basic characteristics of the farmers but also by the level of awareness.

Keywords: Awareness, Perception, Soil Health and Soil Health Card (SHC)

Introduction
Soil is one of the elements required for farming as it provides nutrients to the plant. Soil health plays a vital role to ensure sustainable agricultural production. To popularizing soil test based fertilizer usages, soil health card is a tool to help the farmer to monitor and improve soil health based on recommendations and enables the farmer to use the soil and crop specific fertilizers. It provides a qualitative assessment of soil health and reclamation measures to the problematic soil. To protect soil health and for sustainable agriculture, the Government of India launched SHC scheme in February, 2015. 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, sangosthis, exhibition and demonstrations at village level based on the importance of SHC. A study will be conducted to find out the adoption of SHC based fertilizer application in Burhanpur district. Keeping this view in mind, the present research study entitled “Study on awareness & perception regarding SHC” was conducted with the following objectives:

- To study their socio-personal, economic, communication and psychological profile.
- To aware about utility of SHC.
- To change their attitude towards SHC.
- To find out awareness level and perception of farmers regarding utility of SHC.
- To analyze the constraints expressed by farmers in utilization of SHC.

Materials and Methods

The study was conducted in Burhanpur district of M.P. 120 respondents were selected randomly from four villages of Burhanpur block, 30 respondents were selected from each selected village. 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 expressed by farmers in utilization of SHC. The data collected was subjected to suitable technique of analysis by regression. The under mentioned independent and dependent variables were finally selected for detailed investigation in the present study.

S.No	Variables	Measurement procedure
A.	**Independent Variables**	
1.	Age	Chronological age
2.	Gender	Male/ female
3.	Caste	Modified G. Trivedi Scale (1963)
4.	Education	Modified G. Trivedi Scale (1963)
5.	Occupation	Modified G. Trivedi Scale (1963)
7.	Monthly income	Modified G. Trivedi Scale (1963)
8.	Size of Family	Family type possessed by the respondents
9.	Type of House	House type possessed by the respondents
10.	Size of Land Holding	Land possessed by the respondents in hectares
11.	Achievement motivation	Procedure adopted by Chandrapaul (1998) with suitable modification
12.	Farming Experience	In years
13.	Extension Contact	Schedule
14.	Mass media exposure	Schedule
15.	Social Participation	Direct Questioning
16.	Innovativeness	Scale of Moulik (1965)
17.	Scientific Orientation	Scale of Supe (1969)
B.	**Dependent variables**	
1.	Perception	Index was developed

Results and Discussion

Table 1 shows that middle age respondents were 45% followed by old aged 30% the least number was observed in case of young age group 25%. The possible reason for this would be that "middle aged" respondents were mostly involved agricultural enterprises while old and young aged respondents had negligible role in agriculture enterprises. This might be due to the fact that old and young age people might have engaged in other occupation and middle age respondents might be counseling and guiding the family members. The finding also confirmation with the finding of Singh & Sharma (1990). 89.17 % of the respondents were male where as 10.83% were female. The distribution of the respondents on the basis of their caste shows that 70.84% of the respondents were general, 20.83% OBC and 08.33% of the respondents were ST/SC. The possible reason for this would be that in that area most of the people belonged to upper caste and those some backward caste were migrated from other places. The above table shows that the distribution of the respondents on the basis of education, out of 120 respondents, 14.17% were illiterate, 7.50% can read and write, 6.67% were upto primary school, 198.17% were up to middle school, 24.16% were high school and intermediate and 28.33% were graduate and above. The possible reason for this would be that, with the change in our society from traditional to modern one, education is more formal, systematically organized and bureaucratized. And in most modern societies it is compulsory. This logically true from this fact that the percentage of literacy is very high in state. This finding also confirmting with the finding of Shandilya *et al*. (1985). The above data reveals that the distribution of the respondents on the basis of occupation, the majority of the respondents 65% were having agriculture, followed by business 16.67%, 14.16% were having other occupation and only 04.17% were found to be in service category. The possible reason would be that in agriculture and allied service state more than 70% of the people were engaged on agriculture. So, this state is one of them and that's most of the people 65% was found to be in agriculture. The above data reveals that the distribution of the respondents on the basis of occupation, the majority of the respondents 65% were having agriculture, followed by business 16.67%, 14.16% were having other occupation and only 04.17% were found to be in service category. The possible reason would be that in agriculture and allied service state more than 70% of the people were engaged on agriculture. So, this state is one of them and that's most of the people 65% was found to be in agriculture. The below table reveals that, majority of the total respondents 53.33% were having monthly income more than Rs 15,001 followed by 39.17% having monthlty income of Rs 10,001-15,000 and 7.50% of the respondents having income even less than Rs 10,000.The below table reveals that, majority of the total respondents 53.33% were having large family size which was followed by medium 39.17% only 7.50% of the respondents to small family. It shows that out of 120 farmers, 56.67% of the respondents were found to be in the joint family and 43.33% were found to be in the nuclear family. The reason may be that the family might not be broken after marriage of their sons because of their low size of holding. The finding also with the confirmating with the finding of Biswas *et al*. (1978). It shows that out of 120 farmers, 56.67% of the respondents were found to be in the joint family and 43.33% were found to be in the nuclear family. The reason may be that the family might not be broken after marriage of their sons because of their low size of holding. The finding also with the confirmating with the finding of Biswas *et al*. (1978). The above data indicates that 43.33% of the farmers live in mixed house. 35.83% in pacca and 20.83% in kachcha house. The above table reveals that 43.33% of the respondents having medium size of land holding. 35.83% have small and 20.83% were having large size of holding. This finding also confirmating with the finding of Prasad & Siddharamaiah (1999). The data of the given below table shows that 65.83% farmers having an experience of 5-10 years followed by 17.50% having less than of 5 year's experience wheras 16.67 % respondents having an experience even more than 10 years. Distribution of respondents on the basis of their extension contact were 81.67% having medium followed by 10.83 high and 7.50% were having less contact. The below table reveals that 77.50% farmers were having medium exposure of social media followed by 15.00% low and 7.50% highly exposure of social media. 75.84% respondents having medium social participation followed by 23.33% high and 0.83 % medium participation. 76.67% farmers were more innovative compare to 13.33% high and 10.00% low. 80.00% having medium scientific orientation followed by 13.33% high and 6.67% low. According to achievement motivation 80.00% were medium, 12.50 low and 7.50 were high.

Distribution of respondents according to their socio-personal, economic, communication & psychological profile

S.No.	Particulars	Category	Frequency (No)	Percentage (%)	Rank
1.	**Age (yrs.)**	Young (20 - 35)	30	25.00	III
		Middle (35 - 50)	54	45.00	I
		Old (50 & above)	36	30.00	III
2.	**Gender**	Male	107	89.17	I
		Female	13	10.83	II
3.	**Caste**	General	85	70.84	I
		OBC	25	20.83	II
		SC/ ST	10	08.33	III
4.	**Education**	Illiterate	17	14.17	IV
		Read & Write	09	07.50	V
		Primary School	08	06.67	VI
		Middle School	23	19.17	III
		Intermediate	29	24.16	II
		UG/ PG	34	28.33	I
5.	**Occupation**	Agriculture	78	65.00	I
		Service	05	04.17	IV
		Business	20	16.67	II
		Other	17	14.16	III
6.	**Monthly Income (Rs.)**	Below 10,000	09	07.50	III
		10,001 -1 5,000	47	39.17	II
		15,001 & above	64	53.33	I
7.	**Family Size**	Small (< = 5)	09	07.50	III
		Medium (5 - 10)	47	39.17	II
		Large (> 10)	64	53.33	I
8.	**Type of House**	Kachcha	25	20.83	III
		Pacca	43	35.83	II
		Mixed	52	43.33	I
9.	**Land Holding Size (ha.)**	Small (< = 2)	43	35.83	II
		Medium (2.1 - 4)	52	43.33	I
		Large (> = 4.1)	25	20.83	III
10.	**Farming Experience (yrs.)**	Low (<=5)	21	17.50	II
		Medium (5-10)	79	65.83	I
		High (>=10)	20	16.67	III
11.	**Extension Contact (Score)**	Low (<=5)	09	07.50	III
		Medium (5-10)	98	81.67	I
		High (>=10)	13	10.83	II
12.	**Mass media exposure (Score)**	Low (<=5)	18	15.00	II
		Medium (5-10)	93	77.50	I
		High (>=10)	09	07.50	III
13.	**Social Participation (Score)**	Low (<=5)	01	00.83	III
		Medium (5-10)	91	75.84	I
		High (>=10)	28	23.33	II
14.	**Innovativeness (Score)**	Low (<=5)	12	10.00	III
		Medium (5-10)	92	76.67	I
		High (>=10)	16	13.33	II
15.	**Scientific Orientation (Score)**	Low (<=5)	16	13.33	II
		Medium (5-10)	96	80.00	I
		High (>=10)	08	06.67	III
16.	**Achievement motivation (Score)**	Low (<=5)	15	12.50	II
		Medium (5-10)	96	80.00	I
		High (>=10)	09	07.50	III

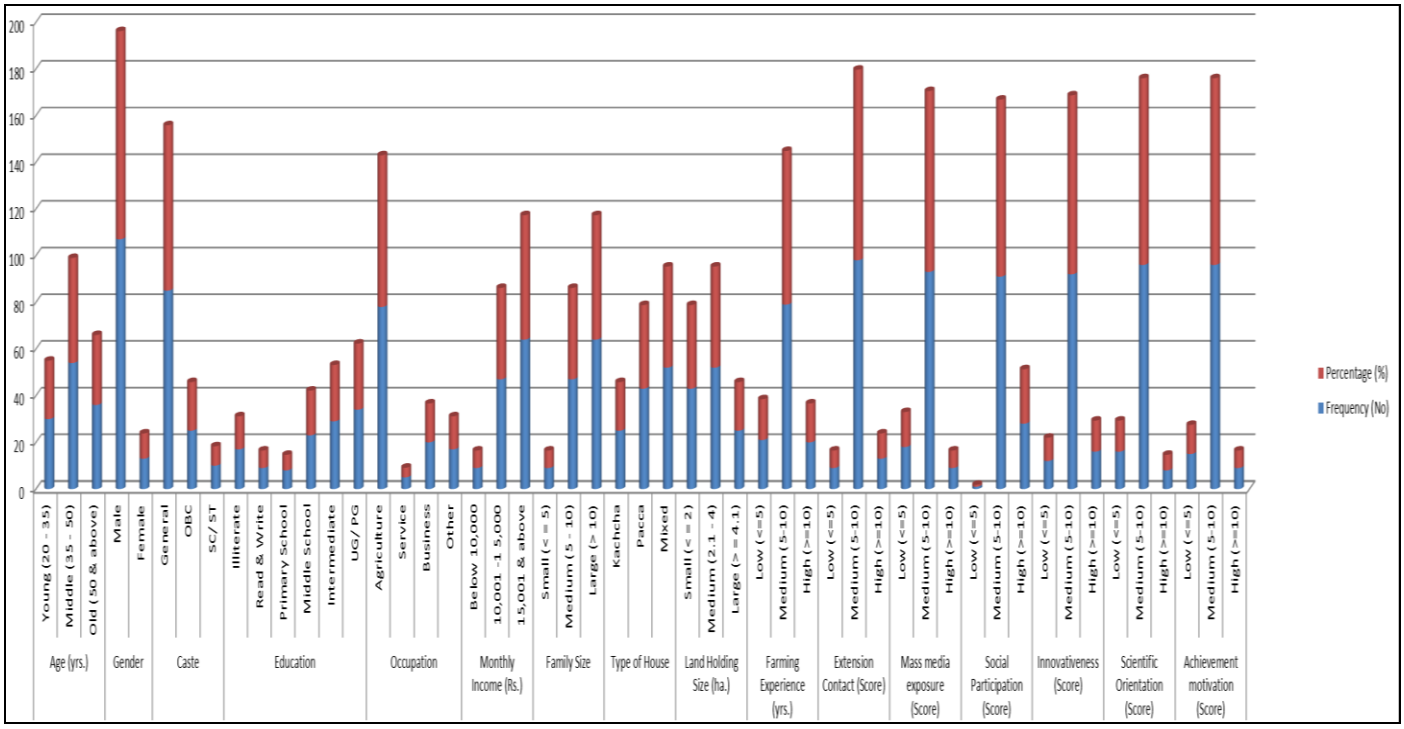


Table II below shows that awareness level of the farmers were medium (57.50%) followed by high (25.00%) and low (17.50) awareness level.

Distribution of respondents according to awareness about SHC

S.No.	Awareness Level (Score)	Frequency (No)	Percentage (%)	Rank
1.	Low (<=5)	21	17.50	III
2.	Medium (5-10)	69	57.50	I
3.	High (>=10)	30	25.00	II
Total		120	100.00	

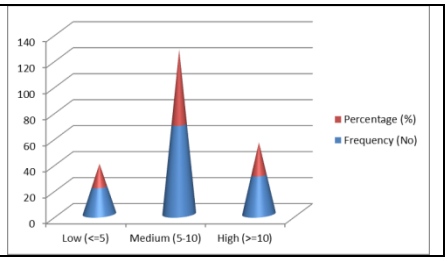


Table III reveals that the response of the farmers on awareness about utility of SHC was highly 79.17% positive response followed by 20.83% having negative response.

Distribution of respondents according to their awareness about utility of SHC

S.No.	Response	Frequency (No)	Percentage (%)	Rank
1.	Yes	95	79.17	I
2.	No	25	20.83	II
Total		120	100.00	

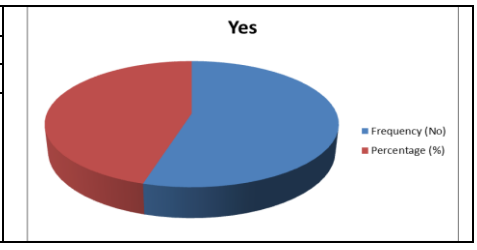


Table IV indicates the respondents perception regarding SHC which shows 82.50% were favorable followed by 12.50% less favorable and 5.00% most favorable.

Distribution of respondents according to their perception regarding SHC

S.No.	Condition	Frequency (No)	Percentage (%)	Rank
1.	Less Favorable	15	12.50	III
2.	Favorable	99	82.50	I
3.	Most Favorable	06	05.00	II
Total		120	100.00	

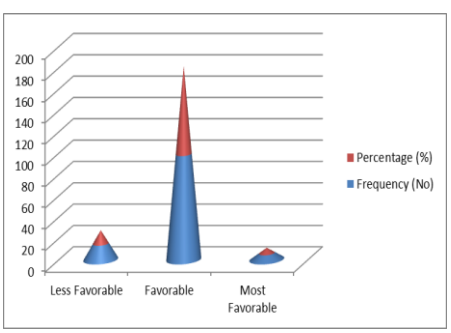


Table V reveals respondents attitude towards SHC. It clearly shows that 80.83% farmers having positive attitude followed by 19.17% having negative attitude towards SHC.

Distribution of respondents according to their attitude towards SHC

S.No.	Attitude	Frequency (No)	Percentage (%)	Rank
1.	Positive	97	80.83	I
2.	Negative	23	19.17	II
Total		120	100.00	

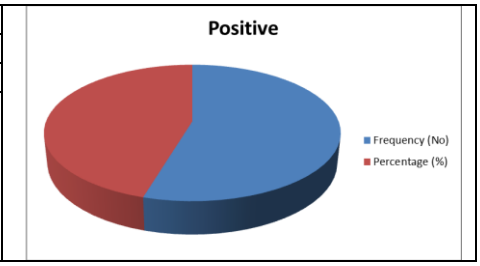
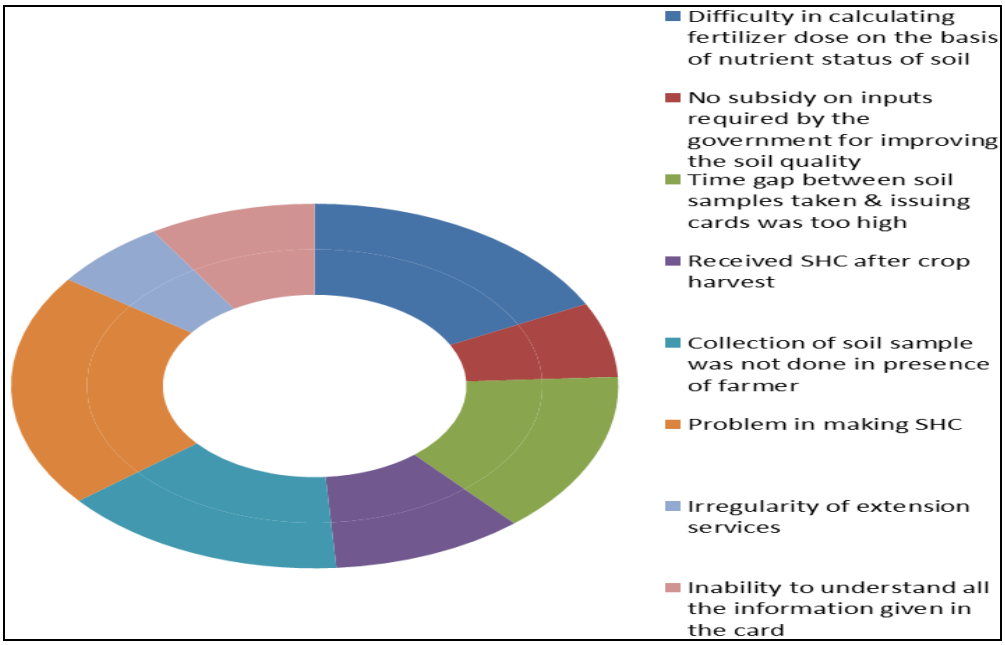


Table VI shows the distribution of respondents according to their constraints expressed by farmers in utilization of SHC. The table revels that 75.83% having problem in making SHC, 64.17% having difficulty in calculating fertilizer dose on the basis of nutrient status of soil, 55.83% collection of soil sample was not done in presence of farmer, 52.50% time gap between soil samples taken & issuing cards was too high, 37.50% received SHC after crop harvest, 32.50% inability to understand all the information given in the card, 24.17% no subsidy on inputs required by the government for improving the soil quality and 22.50% irregularity of extension services.

Distribution of respondents according to their constraints expressed by farmers in utilization of SHC

S.No.	Constraints	Frequency (No)	Percentage (%)	Rank
1.	Difficulty in calculating fertilizer dose on the basis of nutrient status of soil	77	64.17	II
2.	No subsidy on inputs required by the government for improving the soil quality	29	24.17	VII
3.	Time gap between soil samples taken & issuing cards was too high	63	52.50	IV
4.	Received SHC after crop harvest	45	37.50	V
5.	Collection of soil sample was not done in presence of farmer	67	55.83	III
6.	Problem in making SHC	91	75.83	I
7.	Irregularity of extension services	27	22.50	VIII
8.	Inability to understand all the information given in the card	39	32.50	VI



Conclusion

It was observed that the perception of farmers of the relevance of technologies i.e. SHC was not only affected by the basic characteristics of the farmers but also by the level of awareness. The study has revealed that education, land holding, extension contact, mass media exposure, innovativeness, scientific orientation, achievement motivation and awareness level of respondents regarding utility of SHC, whereas variable age, gender, annual income, farming experience and social participation were not found to have any relationship with the perception regarding SHC.

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