

KNOWLEDGE AND ATTITUDE OF FARMERS REGARDING SOIL TESTING PRACTICES IN PASCHIM MEDINIPUR DISTRICT OF WEST BENGAL

Souvik Das¹, Jahanara² & Dipak Kumar Bose³

¹Research Scholar, Department of Agricultural Extension and Communication, SHUATS, Prayagraj, India

²Associate Professor, Department of Agricultural Extension and Communication, SHUATS, Prayagraj, India

³Associate Professor, Department of Agricultural Extension and Communication, SHUATS, Prayagraj, India

ABSTRACT

The study was conducted in Paschim Medinipur District of West Bengal to measure the knowledge and attitude of farmers regarding soil testing practice. Total 120 respondents were selected randomly 4 villages under Sabang block because most of farmers were found to be maximum the data were collected by personal interview method by using pre structure interview schedule and later appropriate statistical analysis was done to find out the meaningful result. The finding of the study related that age 51.66 per cent of the respondents belongs to medium level aged group, majority of the respondents 43.33 per cent belongs to illiterate level of education and most of the respondents were 56.66 per cent doing agriculture alone. Majority of the respondents were having 60.00 per cent of the land holding under low level and their family size is 56.66 per cent whose belongs to medium level family. Majority of the respondents belongs to medium level of Annual income. The finding also revealed that 56.66 per cent of the respondents the medium level of knowledge and attitude was followed by 56.66 and 65.00 per cent of the respondent with low and high levels of knowledge and attitude respectively.

KEYWORDS: *Soil Testing Practice, Knowledge and Attitude*

Article History

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INTRODUCTION

Soil is the primary element required for farming as it provides nutrients to the plant like animal and human being the plant also need food for their proper growth and development. The food of plants constitutes chemical elements that are called plant nutrients or plant food element. The soil testing of a particular field gives reliable information about deficiency of major and micro nutrients in the soils as well as hazards such as soil acidity, alkalinity and salinity. After requesting the soil farmers can know the exact amount of nutrients are already available in the soil and how much quantities of nutrients will have to be provided additionally for a particular crop in a particular field therefore soil testing will definitely advantage advantageous to the farmers in achieving maximum production of maximum profit. Farmers in Paschim Medinipur district in the areas for intensive development are applying large quantities of fertilizer to increase production of their crops which may not appropriate in terms of balance fertilization discuss loss of farmers in short as well as long term (e.g –fixation of phosphorus in the soil). Once the soil conditions are known whether it is acidic or alkaline once can use proper amendment to neutralize it which is necessary for better crop production. For healthy and better crop

production production the soil should rich both major and minor essential nutrients needed for crops. The deficiency of any nutrient in the soil adversely affects the crop production and the yield. The particular Newton deficiency in the soil can be known through soil testing. Most of farmers are using continuously larger quantities of chemical fertilizers to increase the production. Without knowing the fertility status of soil if their field (**Srivastava and Pandey 1999**)

Soil testing is a comprehensive fertility evolution program through which farmers can help themselves in better management of their agriculture operation and use of fertilizer for optimum production. So it's very essential to create maximum awareness among farmers about the chemical fertilizer. Taking this fact into consider action the study was proposed to be conducted on farmers knowledge and attitude of soil testing as management practice in cropping system of Paschim Medinipur district with following.

RESEARCH METHODOLOGY

Descriptive research design was adopted for the study as it describes the characteristics or phenomena that are being studied. The present study was conducted in Paschim Medinipur district of west Bengal. Out of 29 blocks in Paschim Medinipur district, Sabang block is selected purposively based on maximum area covered under soil testing practices. From the selected block, six villages were selected purposively based on the maximum area covered under soil testing practices.

OBJECTIVES

- Find out the knowledge of farmers towards soil testing practice.
- To study the attitude of farmers towards soil testing practices.

RESULTS AND DISCUSSIONS

Table 1 shows its shows that 56.66 per cent of the respondents belongs to the low level of knowledge. In the survey we find that 56.66 per cent of the respondents were under partially correct about the soil testing practice. 53.33 per cent of the respondents were not correct about the method of taking soil sample for testing. 48.33 per cent of the respondents were partially correct about the nearest soil testing laboratory. 50 per cent of the respondents were not correct about the how to interpret the soil test report. 70 Per cent of the respondents were fully correct about the fertilizer improve the soil fertility. 51.66 per cent of the respondents were fully correct about the fertilizers are useful for all types of soil. 68.33 per cent of the respondents were fully correct about the chemical fertilizers increase the crop yields. 38.33 per cent of the respondents were partially correct about the soil testing is necessary to determine the balance dose of fertilizer in any crop. 41.66 per cent of the respondents were partially correct about the soil testing before sowing the crop. 61.66 percent of the respondents were partially correct about the recommended dose of fertilizer in the crop. 45 Per cent of the respondents were partially correct about the time gap after which the soil should be retested. 61.66 per cent of the respondents were fully correct about the time and methods of application of fertilizer in the crop. 45 per cent of the respondents were fully correct about the fertilizer become useless after it's expiry date. 66.66 per cent of the respondents were fully correct about the fertilizer decrease the occurrence of insects, pest and diseases. 41.66 per cent of the respondents were not correct about the incorporation of crop residues useful for soil health. Similar findings were to be reported by (**Changa.M. S. 2005**).

Table 2, it can be seen that more than half of the respondents had low level of knowledge regarding the recommended practices in soil test (56.66 %), followed by medium 35.00 per cent, and high 8.33 per cent level of knowledge. These findings were found similar to the findings in (**Changa.M. S. 2005**).

Table 3 shows its shows that 65 percent of the respondents were under low level of attitude in soil testing practice. 50 per cent of the respondents were disagree for soil testing is necessary for better crop production. 50 per cent of the respondents were agree about the results of soil test are given timely. 58.33 per cent of the respondents were agree about the soil testing is a time taking process. 58.33 per cent of the respondents were disagree about the soil testing is waste of time and money.50 per cent of the respondents were agree about the adoption of recommendation made by soil testing staff.46.66 per cent of the respondents were agree about the expenditure of crop production decreases after soil testing. 61. 66 per cent of the respondents were agree about the area under cultivation increases after soil testing. 45 per cent of the respondents were agree about result of soil testing is reliable. 51.66 per cent of the respondents were agree about cropping intensity increased in one year of soil testing. 51.66 per cent of the respondents were disagree about the impact of recommended material is always positive.

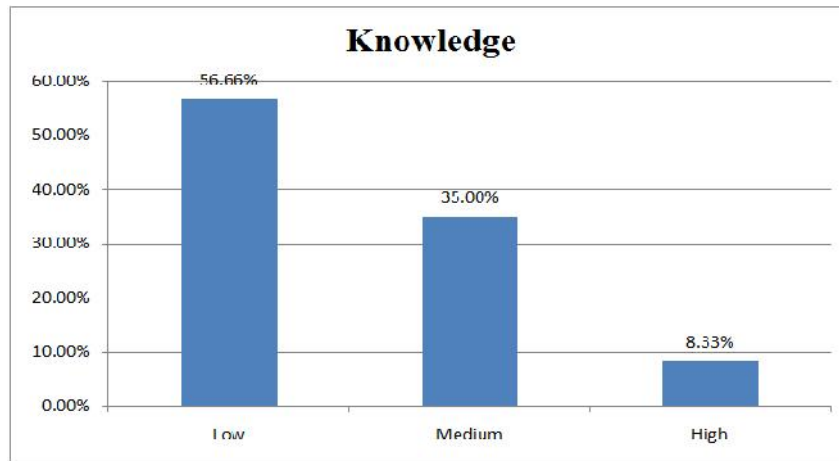
Table 4 shows it was clearly visible that preponderance (65.00 %) of the respondents had low level of attitude on improved soil testing practices, 26.66 per cent and 8.33 percent of the farmers had medium and high level of attitude towards improved soil testing practices respectively. These findings were found similar to the findings in (Changa.M. S. 2005).

Table 1: Knowledge Level of Respondents about Recommended Improved Soil Testing Practices

| S. No | Particulars | Response | | |
|-------|---|-----------------|-------------------|-----------------|
| | | Fully Correct | Partially Correct | Not Correct |
| 1 | Do you know about soil testing practices | 20 (16.66 %) | 68 (56.66 %) | 32 (26.66 %) |
| 2 | Do you know the method taking soil sample for testing? | 8 (6.66 %) | 48 (40.00 %) | 64 (53.33 %) |
| 3 | Do you know where the nearest soil testing laboratory is located | 28 (23.33 %) | 58 (48.33 %) | 34 (28.33 %) |
| 4 | Do you know how to interpret the soil test report | 18 (15.00 %) | 42 (35.00 %) | 60 (50.00 %) |
| 5 | Do you know that fertilizer improve the soil fertility | 84 (70.00 %) | 16 (13.33 %) | 20 (16.66 %) |
| 6 | Do you know that fertilizers are useful for all types of soil | 62 (51.66 %) | 48 (40.00 %) | 10 (8.33 %) |
| 7 | Do you know that chemical fertilizer increase the crop yield | 82 (68.33 %) | 18 (15.00 %) | 20 (16.66 %) |
| 8 | Do you know soil testing is necessary to determine the balance dose of fertilizer in any crop | 34 (28.33 %) | 46 (38.33 %) | 40 (33.33 %) |
| 9 | Do you know do get your soil tested before sowing of the crop | 38 (31.66 %) | 50 (41.66 %) | 32 (26.66 %) |
| 10 | Do you know what is the recommended dose of fertilizer in your crop | 26 (21.66 %) | 74 (61.66 %) | 20 (16.66 %) |
| 11 | Do you know the time gap after which the soil should be retested | 36 (30.00 %) | 54 (45.00 %) | 30 (25.00 %) |
| 12 | Do you know the time and method of application of fertilizer in your crop | 74 (61.66 %) | 36 (30.00 %) | 10 (8.33 %) |
| 13 | Do you know that fertilizer become useless after its expiry date | 54 (45.00 %) | 26 (21.66 %) | 40 (33.33 %) |
| 14 | Do you know that fertilizer decreases the attack / occurrence of insects, pests and diseases | 80 (66.66 %) | 35 (29.10 %) | 05 (4.16 %) |
| 15 | Do you know that incorporation of crop residues is useful for soil health | 30 (25.00 %) | 40 (33.33 %) | 50 (41.66 %) |

Table 2: Overall Knowledge Level of Respondents about Recommended Practices in Tomato Cultivation

| S. No | Over-All Knowledge Level | Frequency | Percentage |
|-------|--------------------------|------------|---------------|
| 1 | Low | 68 | 56.66 |
| 2 | Medium | 42 | 35.00 |
| 3 | High | 10 | 8.33 |
| | Total | 120 | 100.00 |

**Figure 1: Overall Knowledge Level of Respondents about Recommended Practices in Soil Testing.****Table 3: Attitude of the Respondents towards Improved Soil Testing Practices Distribution of Respondents According to Their Attitude Level**

| S. No | Particulars | Level of Attitude by Respondents | | |
|-------|--|----------------------------------|-----------------|-----------------|
| | | Agree | Undecided | Disagree |
| 1 | Soil testing is necessary for better crop production | 40 (33.33 %) | 20 (16.66 %) | 60 (50.00 %) |
| 2 | The result of soil tests are given timely | 60 (50.00 %) | 15 (12.50 %) | 45 (37.50 %) |
| 3 | Soil testing is a very long process | 70 (58.33 %) | 20 (16.66 %) | 30 (25.00 %) |
| 4 | Soil testing is wastage of money and time | 30 (25.00 %) | 20 (16.66 %) | 70 (58.33 %) |
| 5 | After adopting recommendations made by soil testing staff, yield of crop increased | 60 (50.00 %) | 20 (16.66 %) | 40 (33.33 %) |
| 6 | Expenditure of crop production decreases after soil testing | 56 (46.66 %) | 20 (16.66 %) | 44 (36.66 %) |
| 7 | Area under cultivation increases after soil testing | 74 (61.66 %) | 10 (8.33 %) | 36 (30.00 %) |
| 8 | Result of the soil testing in reliable | 54 (45.00 %) | 18 (15.00 %) | 48 (40.00 %) |
| 9 | Cropping intensity increased in one year of soil testing | 62 (51.66 %) | 30 (25.00 %) | 28 (23.33 %) |
| 10 | Impact of recommended material is always positive | 32 (26.66 %) | 26 (21.66 %) | 62 (51.66 %) |

Table 4: Distribution of Respondents According to their Overall Attitude Level

| S. No | Category | Number | Percentage |
|-------|----------------|------------|---------------|
| 1. | Low (10-16) | 78 | 65.00 |
| 2. | Medium (17-23) | 32 | 26.66 |
| 3. | High (24-30) | 10 | 8.33 |
| | Total | 120 | 100.00 |

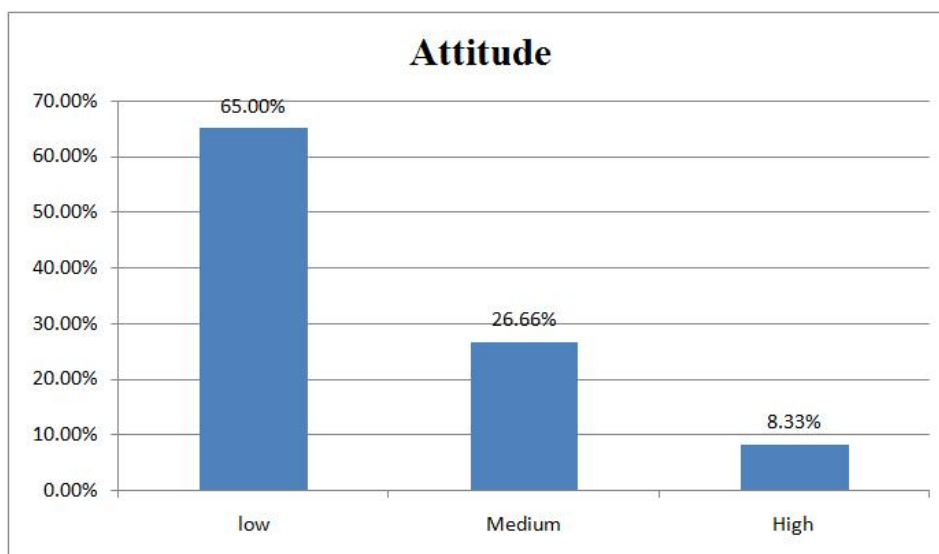


Figure 2: Overall Attitude Level of Respondents about Recommended Practices in Soil Testing.

CONCLUSIONS

It has been concluded from the present study that the knowledge is majority of the respondents were partially correct about the soil testing practices. Most of the respondents were not correct about the interpret the soil test report. Majority of the respondents were fully correct about the time and method of application of fertilizer in the crop. The attitude of the respondents were disagree the soil testing for better crop production. High of the respondents were under the cultivation of crop that increases the production after soil testing. Majority of the respondents has low level of knowledge and low level of attitude towards soil testing practices. It was suggested that the government should organize training programs to convince the farmers about soil testing practices before each kharif and Rabi season.

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