Asian Journal of Agricultural Extension, Economics & Sociology

Volume 40, Issue 12, Page 100-103, 2022; Article no.AJAEES.94548
ISSN: 2320-7027

Gain in Knowledge after Watching Video Clip of Soil Sampling in (SAS Nagar) Punjab India

Gurshaminder Singh [a*] and Nitish Sharma [a]

[a] *University Institute of Agricultural Sciences, Chandigarh University, India.*

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2022/v40i121770

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/94548

Original Research Article

Received: 08/10/2022
Accepted: 10/12/2022
Published: 15/12/2022

ABSTRACT

Soil is one of the element required for farming as it provides nutrients to the plant. Healthy soil contain all the elements for growth and development of crop .Therefore, Soil sampling is one of the most important aspect in the determination of the properties of the soil or the soil deprived from one or more nutrient either reduce the production or degraded quality of crops. Therefore, proportion and quantity of macro and micro nutrients altogether refer to the soil health. As far as agriculture production is concerned, soil health play vital role in ensuring sustainable production with optimizing the utilization of fertilizer and reducing its waste. Soil sampling involves the analysis of a soil sample (from the area which is landscaped) to determine the nutrient content, composition. Of the soil. It allows the farmer to determine accurately which crop would yield the best growth in that particular soil. The survey of 100 respondents was taken and are selected randomly from all the three villages for the research and questionnaire was framed having the questions regarding the soil sampling and data was collected through the interview schedule or interaction of the respondents. Purposive as well as the random sampling procedure were followed in providing the knowledge regarding the soil sampling Then the data has been tabulated and analyzed with the objective to assess the

**Corresponding author: E-mail: Gurshaminder.e10825@cumail.in;*

knowledge gain by the shows that there is significant gain in knowledge by 74.63% more in respondents. After watching the video film it was found that the mean score was 50.81 before watching the video and 88.73 was after watching the video. Thereafter, mean percentage before watching the video was 50.81% and after watching the video was 88.73%. 90% of the respondents are aware about from where the soil sample should be taken and 88% of the respondents are aware of the harmful effects of pesticides to the environment.

Keywords: Farmers; fertilizer; knowledge; percentage; soil sampling.

1. INTRODUCTION

"Soil health play vital role in ensuring sustainable production with optimizing the utilization of fertilizer and reducing its waste. There are around 12 lakh farmer households in Punjab as per records of Punjab Agriculture University (PAU), Ludhiana, and government has claimed to have distributed 24.30 lakhs SHCs. Healthy soil contains all the elements for growth and development of crop or the soil deprived from one or more nutrient either reduce the production or degraded quality of crops. Therefore, proportion and quantity of macro and micro nutrient altogether refers to soil health. Most of the farmers are using continuously larger quantities of chemical fertilizers to increase production without knowing the fertility status of soil if their field" [1]. It is found that lot if area is under problematic soil. Farmers could be educated that they can know the condition of their soil. It can be possible only through soil testing exercises. Soil testing is a comprehensive soil fertility evaluation programme through which farmers can help themselves in better management of their agricultural operation and use of fertilizers for optimum production. It is also helpful in the solution if the crops. Vaish [2] reputed that "there is lack of knowledge among farmers about fertilizers and absence of soil testing fertilizers and crop wise consumption of fertilizers". "To encourage more soil testing as the best management practices, the information must flow from farmers to laboratory and back to farmers" [3] reputed that "attitude towards fertilizers use in better farming were essential in influencing the level of fertilizer use of farmers" Singh and Ray [4]. "Taking these facts into consideration the study was conducted to study the knowledge and attitude of farmers about soil testing practices. Soil testing commonly refers to the analysis of a soil sample to determine nutrient content, composition, and other characteristics such as the acidity or pH level. A soil test can determine fertility, or the expected growth potential of the soil which indicates nutrient deficiencies, potential toxicities from excessive fertility and inhibitions from the presence of non-essential trace minerals. Frequent soil testing helps farmers to decide whether their current management is robbing future productivity and profits. Soil testing involves collecting the soil samples, preparation for analysis, chemical and physical analysis, interpretation of analysis and finally making fertilizer recommendations for the crops" [5]. "Video is now commonly used as a training tool in many development projects. The use of moving images and video's flexibility of use have been cited as important advantages for agricultural training in developing countries" [6]. However, in most cases, the use of videos has not been carefully evaluated in terms of its possible complementary role as well as its ability to replace cur- rent training .The current study examines the use of locally created videos that show local farmers on local fields using the local language. The main objective of this study to analyse the suitable method for enhancing the farmer's knowledge. To analyse the gain in knowledge of the farmers through video clip.

2. METHODOLOGY

The study was conducted in the villages of district SAS Nagar Punjab randomly three villages were selected namely Hasanpur, Kalewal and Singhpura. Total 100 farmers were selected on random basis for the interview. Total 42 respondents were selected from Hasanpur, 35 and 23 from villages Kallewal, Singhpura respectively. A questionnaire containing 11 questions regarding soil sampling was prepared for the interview of respondents. Total two questionnaires were provided to each respondent, first questionnaire was given before showing the video clip regarding soil sampling and the second after showing the clip. Results of both the questionnaires were compared for the analysis. The respondents were interviewed at their homes and in their fields.

3. RESULTS AND DISCUSSION

Majority of the respondents i.e 76% are aware of the term soil testing whereas only 24% respondents are unaware about soil testing.

Table 1. Demonstrates the no. of correct answers before and after showing the video clip

Questions	Before video demonstrateon	After video demonstration
1. What do you came to know after the soil sampling?(Application of fertilizer)	32(32%)	85(85%)
2. Which time period should be suitable for soil sampling?(Before sowing)	50(50%)	89(89%)
3. Which type of pit should be dig for soil sample?(v shape)	46(46%)	85(85%)
4. Which kind of sample should be taken for soil testing? only soil	42(42%)	92(92%)
5. Which kind of information of the field should be taken with the soil sample? (farmer field information)	39(39%)	85(85%)
6. Soil sample should be collected from?(vacant)	90(90%)	100(100%)
7. How deep the soil should be taken for shallow rooted crop?(15cm)	32(32%)	91(91%)
8. How deep the soil should be taken for deep rooted crop?(30cm)	57(57%)	89(89%)
9. How deep the soil should be taken for tree?(1m)	40(40%)	75(75%)
10. Excess use of pesticide lead to affect environment?(harmful effect)	88(88%)	90(90%)
11. How much quantity of soil sample should be need for testing?(500g)	43(43%)	95(95%)
Mean	50.81	88.73%
Mean percentage	50.81%	88.73%
Percentage change	74.63	

From the above table, we can conclude that, there is significant gain in knowledge by 74.63% more in respondents and it is calculated by formula (percentage change=percent after video-percent before video/percent before video) after watching the video film and it was found that the mean score was 50.81 before watching the video and 88.73 was after watching the video. Thereafter, mean percentage before watching the video was 50.81% and after watching the video was 88.73%. Majority of the respondents are aware about from where the soil sample should be taken i.e 90% of the respondents Gave correct answer of this particular question i.e question no.6 in the questionnaire (Soil sample should be collected from). As shown in the table about 88% of the respondents are aware of the harmful effects of pesticides to the environment. The use of imbalance fertilizers can be seen, less importance is given to potassic fertilizers whereas more emphasis is given to nitrogeneous fertilizers followed by phosphatic fertilizers [7]. Hence, the soil sampling leads a way in retaining the fertility of the soil as farmer will be more aware of the deficient nutrients that are present in the soil and can apply only those nutrients in the field which helps in improving the economic status of the farmer. Furthermore, the analysis of the soil is carried out by taking the samples of the soil and performing the laboratory tests, which is then followed by the interpretation of the results, salinity and alkalinity of the soil [8].

4. CONCLUSION

From the findings, it can be concluded that total percentage change of 74.63% is observed in the knowledge of the respondents after showing the video clip. This major change proven that video clips have very high tendency to enhance the knowledge of the farmers. Language also plays vital role in enhancing the knowledge of the farmers. In this study the video clip used for the demonstration was in Punjabi language, each and every farmer understand the video and none of the farmer asked for the repetition of the clip. As per the result obtained it is clear that video clips have positive impact in enhancing the knowledge of farmers, Government should include video clips, animated videos in the training programs organized at various levels like district level training , state level training. Even private agencies should also use these kind of video clips to show the benefits of their products to the farmer. If farmer ensures the testing of soil regularly by maintaining the SHC (Soil Health Card), deficiencies can be find out and only those fertilizers will be applied to the crop and it will also help us to protect the environment as use of

fertilizers will be minimized and adoption of organic farming will also finds a way as healthy soil contain all the elements for growth and development of crop. Educational awareness and soil testing laboratory in nearby locations found to be the most influential factor in adoption of the technology.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Srivastava YC, Pandey AP. Knowledge and attitude of small and marginal farmers towards soil testing. Agricultural Extension Review. 1999;11(6):3-6.
2. Vaish RR. Region wise and crop wise consumption of fertilizers in Haryana. ISAE. 1998;144.
3. Voughan B. Communication of result to clients. Common Soil Science Monticello, New York. 2000;31(11-14):1473-1477.
4. Singh AK, Ray GL. Fertilizer use of farmers. Indian Journal of Extension Education 3. 1985;21(3-4):9.
5. Claire J. Glendenning, Suresh Chandra Babu, Kwadwo Asenso-Okyere. Extension through entrepreneurial approach: Evaluating the agriclinics program. Agricultural Extension Reforms in South. Status, Challenges, and Policy Options. 2019;201-234.
6. Van Mele P. Video-mediated farmer-to-farmer learning for sustainable Agriculture. Ghent, Belgium: Agro-Insight; 2011.
7. Inderveer Singh G, Namuse F. Agronomic practices followed by the farmers in kharar division (SAS Nagar) Punjab. Asian Journal of Agricultural Extension, Economics & Sociology. 2022;40(12):9-15. Available:https://doi.org/10.9734/ajaees/2022/v40i121761
8. Anju Agnihotri Chaba. Punjab farmers still haven't heard of soil health card; 2020. Available:https://indianexpress.com/article/cities/chandigarh/launched-5-years-ago-punjab-farmers-still-havent-heard-of-a-soil-health-card-6566017/ x

© 2022 Singh and Sharma; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
https://www.sdiarticle5.com/review-history/94548