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“ASSESSMENT AND VALIDATION OF ‘SOIL TESTING VCD’ BY FARMERS OF BARAMATI, DISTRICT. PUNE”



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ABSTRACT :

Soil is a basic physical factor of agriculture and is studied in agricultural geography. The Physical, chemical and biological properties of soil are studied by the soil testing process in the soil laboratory. These properties affect the growth of crops and their production. The problems related to the collection of soil sample and communicating this knowledge to farmers was the main objective of this work. The study includes making the audio-visual media (VCD) on soil sample collection and implementation of the soil test report. To overcome all types of difficulties, as discussed above the researcher has developed the communication VCD namely “Parikshan Mrudeche, Sanvardhan Shetiche.” in Marathi.

KEYWORDS: *Assessment and Validation*

INTRODUCTION :

Education through electronic devices is a powerful learning experience. The VCD are useful and an effective media of learning any subject. who could learn by voice and visuals or moving images, VCD is the best solution for communication. The VCD could run with the help of VCD / DVD player or by computer

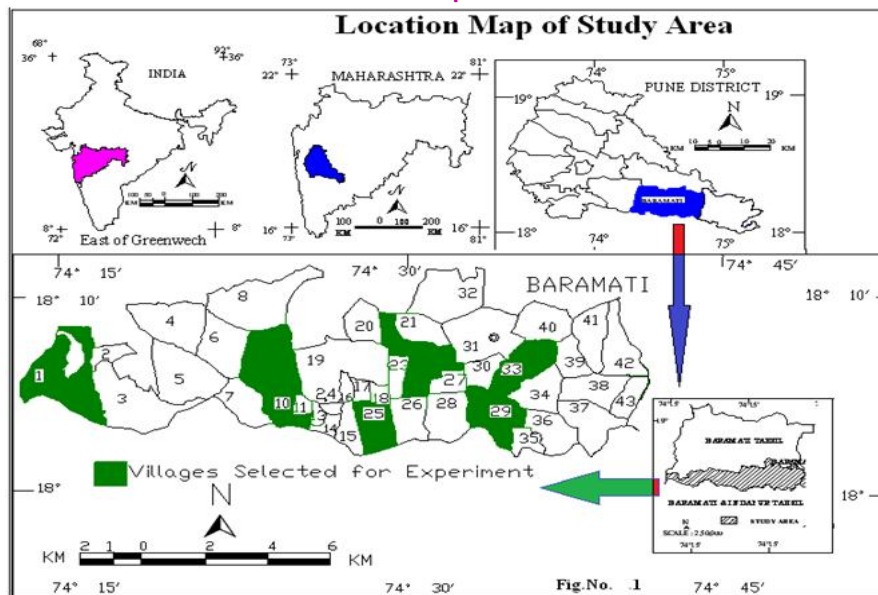
also. VCD is a powerful educational tool, which is helpful to achieve the curricular objectives. The objective of such investigation is to create the VCD on the topics like soil sampling process for the farmers.

LOCALITY OF STUDY AREA:-

The present study was conducted in Nira Left Bank Canal (NLBC) irrigated area of Baramati tahsil of Pune district in Maharashtra state. The study area lies between $17^{\circ} 53' 44.23''$ to $18^{\circ} 12' 34.64''$ North longitude and $74^{\circ} 13' 6.22''$ to $75^{\circ} 1' 6.7''$ East latitude of Pune district. The study area lies in the southern part of Pune district of Maharashtra state. Administratively, it is bounded by Indapur tahsil towards the east, Purandar tahsil (District Pune) towards the west, Satara districts towards the south and Nira Left Bank Canal is to the north.

The area consists of 43 villages and one urban center (Baramati Town) of Baramati tahsil. The total area of study covering villages of Baramati is 49,432.7 sq. hectares and only 7,502 sq. hectares of total is under canal irrigation. The southern boundary of the study area is marked by Nira River and north boundary is marked by Nira Left Bank Canal line in Baramati tahsil of Pune district. The crops are grown throughout the year because of perennial water supply from Nira Left Bank canal and Nira river. But, the northern side of canal line of Baramati tahsil depends on the monsoonal rainfall for crop production. The Nira Left Bank Canal line is the dividing line between dry and irrigated land of Baramati & Indapur tahsils. Map.1

Location map of study Center
Map.1



OBJECTIVES OF THE STUDY:

1. To understand the role of communication media in equipping the farmers with knowledge and to develop the VCD.
2. To assess, the effectiveness of the VCD and create soil testing awareness among farmer.

Hypothesis: - Present paper urges to create awareness between farmer with the help of VCD

1. $H_1: \mu_d \neq 0$: VCD multimedia creates awareness among the farmers to acquire knowledge to improve soil collection for soil testing.
2. $H_0: \mu_d = 0$: There is no significant difference between marks scores for creating awareness among farmers for knowledge improvement of soil testing.

DEVELOPMENT OF VCD

The researcher developed the VCD as communication material for the farmers of Nira left bank canal irrigated area. The knowledge about the subject, the contents of VCD etc. were collected. This information was arranged systematically in the script. With the help of the script, the dialogue about different characteristics and the steps, were made separately and actual shooting was done with video camera which was then converted in to digital form (VCD).

RESEARCH METHODOLOGY & DATA BASE:

Focus of the study was on communication with the farmers regarding the soil testing process. ‘Systematic sampling’ method was used for the selection of site, villages and convenient sampling for respondent for the experiment.

SELECTION OF VILLAGES RESPONDENT FARMERS:-

The study was conducted in Baramati tahsils of Pune district through which the Nira Left Bank Canal passes. The list of villages which receive canal water was prepared from Government Irrigation Department offices. The ‘systematic sampling’ method depending on the distance variation of 10, 20, 30, and 40 Kilo Meters away from tahsil headquarter was selected. Tahsil headquarter positively affects the communication with the farmers because of establishment of taluka agricultural office at tahsil place. As a whole, 135 farmers each 15 from respondents from 9 villages Gunawadi, Nirawagaj, Malegaon BK., Pandare, Sangvi, Korhale, Bajrangwadi, Lat& Nimbut were selected for conducting the experimental study.

To conduct the study, the criteria for selecting the farmers was as follows- 1. Farmers having agricultural land, cultivated by themselves. 2. Farmers who can read and write *Marathi* 3. Farmers who do not know about soil testing process and have not tested farm soil. 4. Farmers of any age group.

METHODOLOGY:

The developed VCD shown to the farmers by group of 15 farmers. Statistical formula used for the analysis:- Appropriate statistical ‘t’ test techniques used to make strong findings.

t test =

$$t = \frac{\bar{d}}{sd/\sqrt{n}} \text{ where } \bar{d} = \frac{\sum d}{n}, \quad sd = \frac{1}{n} \sum_{i=1}^n (d_i - \bar{d})^2$$

1. Development of VCD

The VCD was developed as a communication medium to serve as a comprehensive resource to the farmers. By using this VCD, the farmers will have access to knowledge about the process of soil testing. The VCD was developed by the subject title, need of soil testing, salts affected soil, taking soil sample, making representative soil sample, interview of farmer, nutrient deficiency of crops, the laboratory work, implementation of soil test report, To overcome all types of difficulties, as discussed above the researcher has developed the communication VCD by showing to subject matter experts, instructional designer, technical expert, and extension education expert and their opinion has been taken into account to develop the tools. namely “*Parikshan Mrudeche, Sanvardhan Shetiche.*” In Marathi

EXPERIMENT:

Group of 15 farmers was selected for this study. The pre an achievement test of 25 marks was given to solve them within 20 minutes time. After collecting the test paper. Then the communication VCD was shown to all the farmers under one roof at the same time. After the VCD show, Post Tests of 25 marks were given to be answered in 20 mints. After the experiment, separate opinion test was given to solve and they were asked about various aspects of the VCD.

RESULT AND DISCUSSION:

Table No.1 shows overall opinions about VCD

Sr .No	Factors Of VCD	No. of Responses*				
		Not Good	Satisfactory	Medium	Excellent	Very Excellent
1	Practicability	0	3 (20)	4 (20.6)	5 (33.33)	3 (20)
2	Presentation	0	1 (6.6)	4 (20.6)	7 (46.66)	3 (20)
3	Knowledge	0	1 (6.6)	1 (6.6)	9 (60)	4 (20.6)
4	Encourage	0	1 (6.6)	2 (13.33)	8 (53.33)	4 (20.6)
5	Comfort ability	0	2 (13.33)	3 (20)	6 (40)	4 (20.6)
6	Attractiveness	0	1 (6.6)	4 (20.6)	4 (20.6)	6 (40)
7	Understood	0	0	5 (33.33)	7 (46.66)	3 (20)
8	Skill	0	3 (20)	1 (6.6)	8 (53.33)	3 (20)
9	VCD To follow	0	2 (13.33)	1 (6.6)	7(46.66)	5 (33.33)
	Message	0	1 (6.6)	1 (6.6)	6 (40)	7 (46.66)
	Average	0	15 (10)	26 (17.33)	67 (44.66)	42 (28)

*Figures in brackets indicate percentage

Overall opinion could be observed from the Table No. 4 about the VCD practicability 33.33 % of the farmer had rated the VCD as ‘Excellent’, While 20% of the farmer had rated the VCD as ‘Medium’ and 20 % of the farmer rated it as ‘very excellent’ and ‘Medium’ also.

About the VCD presentation 46.66 % farmer had rated the VCD as ‘excellent’, 25.6 % farmer had rated ‘medium’ while 6.6 % farmer had rated the VCD as ‘very excellent’.

To take knowledge from VCD 60 % of the farmer had rated the VCD as ‘excellent’, 26.6 % of the farmer had rated the VCD as ‘very excellent’ while only 6.6% of the farmer rated the VCD as ‘medium’ and ‘satisfactory’

For getting encouragement form the VCD, 53.% of the farmers had rated the VCD as ‘excellent’, 26.66 % of the farmer had rated the VCD as ‘Very excellent’. while 13.33 % of the farmers rated the VCD as ‘medium’ and only 6.6 % of the farmers rated the VCD as ‘satisfactory’.

For comfortability of observation of the VCD, 40 % of the farmers had rated the VCD as ‘excellent’. 26.66 % while 20 % of the farmers rated the VCD as ‘medium’ and only 13.33 % of the farmers rated the VCD as ‘satisfactory’.

The attractiveness of the VCD, 40 % of the farmers had rated the VCD as ‘very excellent’. 26.66 % of the farmers the VCD as ‘excellent’. while 26.66 % of the farmer had rated the VCD as ‘medium’ and 6.6 % of the farmer had rated the VCD as ‘satisfactory’.

To understand the VCD content 46.66% of the farmers had rated the VCD as ‘excellent’, 33.33% of the farmers had rated ‘medium’ and 20% of the farmer had rated VCD is ‘very excellent’.

To obtain skills of soil sample collecting for the soil testing from the VCD, 53.33% of the farmers had rated the VCD as ‘excellent’, 20% of the farmers had rated the VCD as ‘excellent’ and 20 % of the farmer had rated the VCD as ‘ very excellent’, while 13.33 % of the farmers had rated the VCD as ‘satisfactory’.

To give the soil testing message by the VCD 46.66% of the farmers had rated the VCD as ‘very excellent’, 40% of the farmers had rated the VCD as ‘excellent’ while only 6.6 % of the farmer had rated the VCD as ‘medium and satisfactory’.

Overall (average) opinion of the farmers about the VCD was that 44.66% of the farmers had rated as ‘excellent’, 28% of the farmers had rated as ‘very excellent’, while 17.33% of the farmers had rated as ‘medium’ and 10% of the farmers had rated as ‘satisfactory’.

TESTING OF HYPOTHESIS:

After reevaluation and accepting the suggestions, the study and pre-post test of 25 marks was conducted and the results are given in Table No. 2

t- Test: Paired Two Sample for Means

Table No.2

Observation	Variable 1	Variable 2
Mean	14.2	18.33333
Variance	6.6	7.238095
Observations	15	15
Pearson Correlation	0.785419	
Df	14	
t Stat	-9.2719	
P(T<=t) one-tail	1.18E-07	
t Critical one-tail	1.76131	
P(T<=t) two-tail	2.36E-07	
t Critical two-tail	2.144787	

By this result we can say that there is significant difference between score of pre and post test.

CONCLUSION:

The development of VCD was the main task of this research. VCD is a 22 minute film in which soil testing importance was given on how to divide farm land to collect soil sample. To create awareness about collecting soil sample for soil testing among farmers is the main purpose of VCD show. Actual soil sample collection, selecting representative soil sample from all collected soil, effect of deficiency of nutrients on crops, use of proper fertilizers for different crops are the topics of VCD to create awareness in the farmer community.

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