



Research Article

## Knowledge and attitude of tribal farmers of Valsad district towards soil testing

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**SUMMARY :** To assess the knowledge and attitude of tribal farmers of valsad district towards the soil testing, 200 tribal farmers were randomly selected from 20 villages. Results of study indicate that majority of adopters, believed that soil testing is useful, reduce the use of chemical fertilizers and it is necessary for sustainable soil health and productivity. Although they said that fertilizer recommendations based on soil testing are difficult to apply. By the training, demonstration and other extension activities adoption percentage of soil testing in tribal farmers can be improved.

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**KEY WORDS :**

Soil health, Balance nutrition, Fertilizer, Tribal

### BACKGROUND AND OBJECTIVES

Soil testing for the Agricultural industry is one of the most cost effective tools available for making informed soil management decisions. Lal (2003) indicated that soil management can play important roles in improving utilization increasing self-sufficiency of nutritious crop, decreasing poverty levels and providing food and sustainable agriculture. Based on the soil testing, farmers are advised on soil fertility management through rational use of manure, fertilizers and amendments to make agriculture more productive and sustainable. Yadav *et al.* (2006) stated that soil testing has exposed some information about the accurate amount of nutrients of special kinds of plants and also other information such as saline-alkali soil, type and methods of fertilizer application for a particular crop, which results into reduction in use of costly chemical fertilizers though reduction in cost of cultivation, improvement in soil fertility and increase net profit.

Gujarat Vidyapeeth, Krishi Vigyan Kendra (GVKVK) -Ambheti is located in Valsad district of Gujarat, which composed largely of tribal communities depends primarily on agriculture for their livelihood. Soils of the district in general can be classified as medium black to heavy black soil

with low fertility. Srivastava and Pandey (1999) believed that most farmers continuously use a great deal of chemical fertilizers for increasing production without awareness of their farm fertility condition. Tribal farmers of district waste lots of money for costly fertilizers and increasing cost so they are getting low return though there is ample scope of reduction in fertilizer cost and improvement in soil health through nutrient management based on soil testing.

Keeping in view of above facts, KVK-Ambheti has carried out study to find out knowledge and attitude of tribal farmers of valsad district towards soil testing practices. The main objective of study was to investigate the knowledge and attitude of tribal farmers of valsad district towards soil testing.

### RESOURCES AND METHODS

During the year 2011-12, Krishi Vigyan Kendra-Ambheti was frame out the study for assessment of knowledge and attitude of tribal farmers of valsad district towards soil testing. For the study 100, tribal farmers who already adopted soil testing and 100, tribal farmers as non-adopter were randomly selected from 20 villages of district. For evaluating the farmers' knowledge and attitude

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towards soil testing, 9 statements about soil testing concepts, principles and methods were propounded. Farmers were asked to indicate their opinion about the statement being true or false. Data were collected by personal interview method with the pretested schedule designed for the purpose.

## OBSERVATIONS AND ANALYSIS

The data predicted in Table 1 indicate that out of 100 soil testing adopters, average more than 85 respondents had complete, 7 had partial and average less than 2 respondents had no knowledge about soil testing. In case of non-adopter tribal farmers average less than 08 respondents had complete knowledge and average more than 38 had no knowledge, although average more than 41 respondents had partial knowledge about 9 statements regarding soil testing. It indicates that majority of the adopters had complete knowledge, while non-adopters had partial knowledge about soil testing. The adoption of soil testing practices by the tribal farmers depends primarily upon knowledge of these.

Regarding the attitude of tribal farmers towards soil

testing practices depicted in Table 2 shows that most of respondents have positive attitude. Out of 100 adopters, 91 and 64 tribal farmers did not agree with the statement that soil testing is useless and the statement soil sample collection is complicated and time consuming process, respectively. Although 72 and 60 adopters agreed with the statement that soil testing is necessary for sustainable soil health and productivity and soil testing, reduces the use of chemical fertilizers, respectively. Further, 52 adopters said that the cost of cultivation reduces due to soil testing. The results are in conformity with the result of Srivastava and Pandey (1999), Yadav *et al.* (2005), Saeid *et al.* (2010) and Pagaria (2011). Results of the study revealed that there is a scope to improve extent of adoption of soil testing among tribal farmers of Valsad district by awareness bringing through training, demonstration and other extension activities in Valsad district.

As shown in Table 2 out of 100 adopters, 68 respondents believed that fertilizer recommendations based on soil testing are useful and 58 respondents found positive results after application of soil testing based recommendation on crops. It indicates the introvert nature of tribal farmers of Valsad district.

**Table 1 : Distribution of respondents according to their knowledge regarding soil testing**

Sr. No.	Particulars	Adopters (n=100)			Non-adopters (n=100)		
		Complete knowledge	Partial knowledge	No knowledge	Complete knowledge	Partial knowledge	No knowledge
1.	Ideal time for collection of soil samples	89	10	01	01	44	55
2.	Minimum quantity of soil should be required for sample testing	85	13	02	04	53	43
3.	Selection of points in field for soil sampling	86	13	01	03	59	38
4.	Ideal depth for soil sampling for different crops	91	08	02	01	61	38
5.	Implements used for soil sampling	85	14	01	02	45	53
6.	Method for soil sampling from field has standing crops/perennial trees.	92	07	01	08	58	34
7.	Preparation of soil samples for testing	90	08	02	01	52	47
8.	Information required to fill on soil sample bag	86	13	01	01	41	58
9.	Frequency of soil testing done for same field having monocropping/multicropping	91	08	02	02	46	52

**Table 2 : Distribution of respondents according to their attitude towards soil testing practices**

Sr. No.	Statements	Attitude (n=100)		
		Agree	Undecided	Disagree
1.	Soil sample collection is complicated and time consuming process	26	10	64
2.	Soil testing is necessary for sustainable soil health and productivity	72	13	15
3.	Soil testing is useless	04	05	91
4.	Soil testing, reduce the use of chemical fertilizers	60	10	30
5.	Fertilizer recommendations based on soil testing are not useful	12	20	68
6.	Fertilizer recommendations based on soil testing are difficult to apply	36	03	61
7.	Positive results found after application of recommendation on crops	58	27	15
8.	Cost of cultivation reduces due to soil testing	52	12	36

This findings is consistent with the results founded by Srivastava and Pandey (1999), Yadav *et al.* (2005), Saeid *et al.* (2010) and Pagaria (2011).

### Conclusion:

After the analysis of collected data, it is concluded that the tribal farmers of district were aware from soil testing practice. They also know, regular soil testing contributes to environmental sustainability as the use of excess fertilizers can be avoided. Different extension agencies should make more effort for adoption of soil testing practices. It results into assure national food security, nutritional security, maintenance of soil health, enhancement of soil fertility and to leave a good heritage for the future generations.

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