

Comparing Soil Quality of Kharawli Village

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Abstract: *The natural environment is clean, but due to multifarious activities of man, it gets polluted resulting in what is called environmental pollution. In the present study it was preferred to investigate the soil samples for its physico-chemical analysis of some parameters. representative samples were obtained and analyzed for its pH, EC, Phosphorus, Potassium, Sulfur and Carbon*

Keywords: Physico-chemical, EC, PH, Phosphorus, Potassium, Sulfur and Carbon

I. INTRODUCTION

According to Census 2011 information the location code or village code of Kharavali village is 554631. Kharavali village is located in Mangaon tehsil of Raigarh district in Maharashtra, India. It is situated 7km away from sub-district headquarter Mangaon (tehsildar office) and 92km away from district headquarter Alibag. As per 2009 stats, Kharavali village is also a gram panchayat.

The total geographical area of village is 469 hectares. Kharavali has a total population of 1,107 peoples, out of which male population is 541 while female population is 566. Literacy rate of kharavali village is 76.87% out of which 80.78% males and 73.14% females are literate. There are about 266 houses in kharavali village. Pincode of kharavali village locality is 402104.

When it comes to administration, Kharavali village is administrated by a sarpanch who is elected representative of the village by the local elections. As per 2019 stats, Kharavali village comes under Shrivardhan assembly constituency & Raigad parliamentary constituency. Mahad is nearest town to kharavali for all major economic activities, which is approximately 32km away.

This village is famous for its crop cultivation like Gram Rice mangoes veggies due to availability of good fertile black soil and red soil. In this experiment we will compare different parameters of both the soils. It is the need of time that we have to study the physico-chemical parameters of soil to know its quality. representative samples were collected from various parts of the taluka and its physico-chemical analysis have been performed to know its different parameters like pH, Electrical Conductivity, Phosphorous, Potassium, Sulfur, Carbon and Boron.

Materials and Methods:

Surface soil (0-0.2m) samples of Shrivardhan village.

1. pH:

The most significant property of soil is its pH level, Its effects on all other parameters of soil. Therefore, pH is considered while analysing any kind of soil. If the pH is less than 6 then it is said to be an acidic soil, the pH range from 6-8.5 it's a normal soil and greater than 8.5 then it is said to be alkaline soil.

2. Electrical conductivity:

Electrical conductivity is also a very important property of the soil, it is used to check the quality of the soil. It is a measure of ions present in solution The electrical conductivity of a soil solution increases with the increased concentration of ions. Electrical conductivity is a very quick, simple and inexpensive method to check health of soils. It is a measure of ions present in solution. The electrical conductivity of a soil solution increases with the increased concentration of ions.

3. Phosphorus:

Phosphorus is a most important element present in every living cell. It is one of the most important micronutrient essential for plant growth. Phosphorus most often limits nutrients remains present in plant nuclei and act as an energy storage.

4. Potassium

Potassium plays an important role in different physiological processes of plants, it is one of the important element for the development of the plant. It is involved in many plant metabolism reactions, ranging from lignin and cellulose used for the formation of cellular structural components, for regulation of photosynthesis and production of plant sugars that are used for various plant metabolic needs.

5. Sulfur

Sulfur is as necessary as phosphorus and is considered an essential mineral. Sulphur in plants helps form important enzymes and assists in the formation of plant proteins. It is needed in very low amount, but deficiency can cause serious plant health problems and loss of vitality.

6. Carbon

organic carbon is the basis of soil fertility. It release nutrient for plant growth, promotes the structure, biological and physical health of soil, and is buffer against harmful substances. Increasing soil organic carbon has two benefits- as well as helping to mitigate climate change, it improves soil health and fertility. Many management practices that increase soil organic carbon also improve crop and pasture yields

II. RESULT AND DISCUSSION

Physico chemical parameters	Black soil	Red soil
pH	7.5	6.1
EC (mmho/cm)	0.8	0.5
Phosphorus (kilo/hectare)	12.66	10.6
Potassium(ppm)	252.67	167.66
Carbon(%)	0.58	0.34

III. CONCLUSION

It was observed that different areas of soil had influences on the physicochemical characteristics of the soils. However, application of more labile organic inputs, liming materials and suitable inorganic fertilizers (N-P-K) would be effective for sustainable management and improving fertility status of the soils. Such type of monitoring of soil sample is beneficial to know the concentrations of various parameters present in soil samples. this soil is very use`full in cultivation of coconut, Magoes, betel palm etc. from this observation we can conclude that black soil is more fertile and convenient to use for cultivation of different crops.

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