



Study of Soil Nutrient Status of Suregaon Village of Newasa Tahasil of Ahmednagar District, Maharashtra India

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Abstract

Present study was carried out at Soil testing laboratory loknete marutrao ghule patil DSSK ltd bhende 120 soil samples were collected from agriculture land for present study. Agriculture area of the village suregaon is 120 hectare. One soil sample from one hectare area was taken. The parameters such as available nitrogen, available phosphate, available potassium, and available micronutrients like zinc, ferrous, copper, manganese were analyzed. On the basis of result obtained, out of 120 samples analyzed for soil nutrient status it was recorded that, available nitrogen and phosphate were recorded very low, available potassium was recorded very high micronutrient status were 100% deficiency of ferrous and zinc and 8.3% deficiency of manganese was recorded where as copper was recorded sufficient level.

Key words- Soil, micronutrient,

Introduction:

The seventy percent of rural households and eight percent of urban households are still depends on agriculture for employment.(Abhishek and Shanmugasundaram 2020) The soil is medium for all types of terrestrial crop. Recent year for getting more yield farmers are using heavy doses and without proper substitution of synthetic fertilizers and herbicides resulted in the change in the chemical properties of the soil (

S.S. Narwal 2004). The imbalance application of chemical fertilizers and heavy irrigation, lack of use of organic fertilizer, less green manuring and crop rotation the productivity of the soil goes on decreasing (R. J. Daji 1996). The fertility status of the soil suregaon village was selected because during survey the productivity is recorded very low, mono cropping pattern is adopted in suregaon village. Suregaon village occupied about 120 hector area under agriculture. To study the nutrient status of the soil , we have taken one soil sample for one hector area; about 120 soil samples were collected for present study.

Materials and methods:

One sample from one hector areas was collected. Total 120 soil samples were collected for investigation. The soil samples were collected from depth of 0-20 cm (Guicharnaud 2010) The parameters analyzed to evaluate the nutrient status were available nitrogen (K-jeldal), available phosphate (Spectrophotometer method), available potassium (Flame photometer method) as well as micronutrient like as Fe, Cu , Mn, Zn by atomic absorption spectrometric method. Fertility index were calculated (Mukeshama 2007), (Ramamoorthy and Bajaj 1969) classification of nutrient index values .(Abhishek and Shanmugasundaram 2020)

Table 1- Fertility index and level of Major nutrient in the soil of Suregaon village.

Sr/no	Major Nutrient	Fertility Index	Fertility level
1	Available Nitrogen	0.62	Very low
2	Available Phosphate	1.04	Very Low
3	Available Potash	3	Very high

Table 2- Micronutrient percent deficiency in the soil of Suregaon village.

Sr/no	Testing parameters	Deficient samples	Percentage
1	Ferrous	120	100%
2	Copper	00	00%
3	Manganese	10	8.33%
4	Zinc	120	100%

Discussion:

Out of above analyzed sample the available nitrogen phosphate was recorded very low and potassium was recorded very high where as 120 soil samples were deficient for Ferrous, and zinc which was 100% deficient followed by manganese 10 samples were deficient that is 8.33% no deficiency copper was recorded. Comparing with standard of mahatma phule krishi vidyapeeth, rahuri.

Conclusion:

It is concluded that, the agriculture land of suregaon village of newasa tahsil of ahmednagar district is sufficient with potassium, and deficits with nitrogen and phosphate. Micronutrients like zinc and ferrous was 100% deficits followed by manganese 8.33% copper was recorded sufficient. Overall the productivity of soil of suregaon village goes on decreasing due to unavailability of macro and micronutrient.

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