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RESEARCH ARTICLE

Physico - chemical and micronutrients status of soils of Velhale village Bhusawal tehsil, Jalgaon district Maharashtra, India

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SUMMARY

Soil fertility is the quality of soil to supply nutrients in the proper amount for plant growth without causing toxicity and deficiency. Soil fertility management is highly complex given the myriad of interacting factors that dictate the extent to which farming state farms invest in the fertility of their soils. To achieve precision in farming and to maximize crop production, there should be proper maintenance of soil health and minimize fertilizer mis application One hundred farmers were randomly selected from the Velhale Village Bhusawal Tehsil, Jalgaon district Maharashtra through the Soil Health Card Scheme under the Department of Soil Science and Agricultural Chemistry, Dr Ulhas Patil College of Agriculture, Jalgaon Maharashtra to assess the physico-chemical properties, macro and micronutrients status of soils in the year 2019-20. One hundred geo-referenced soil samples (0-20 cm) from Velhale Village Bhusawal were collected and analyzed in the laboratory for soil pH, electrical conductivity, organic carbon content, calcium carbonate content, available macronutrients *viz.,* N, P, K, S and micronutrients like Fe, Zn, Cu, Mn and B.The pH and EC of soils collected from the study area varied from 6.5 to 8.1 and 0.54 to 0.90 dS m^{-1} showing the neutral to alkaline nature of soil and soils are safe in total soluble salt content and organic carbon content was very low to medium 0.18 to 0.59%, respectively. The results obtained in the present study clearly showed large variability in the chemical properties of soil. The available sulphur varied from (6.92 to18.00 mg kg^{-1}) low to medium. Available iron and zinc content was low to medium (0.50-6.26 and 0.42-0.79 mg kg^{-1}, respectively) while, copper and manganese content was sufficient (0.31-0.82 and 0.50-4.64 mg kg^{-1}, respectively) across the study area. Available boron in soils of all the tehsil ranged from 0.56to 2.58 mg kg^{-1} (medium to high). Soil testing plays an important role in the use of fertilizers and other agricultural inputs. Soil test summaries and soil fertility maps are of vital necessity as reference materials for the scientific management of soil. This information could aid in decision making for the application of plant nutrients for higher monetary returns to the farmers.

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