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Research Note

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Georeferenced status of molybdenum in soils of Yavatmal district of Maharashtra

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The transition element molybdenum (Mo) is an essential micronutrient for plants, animals and most micro-organisms. It has been established that molybdenum take part in fixing and assimilation of chemical composition of plants. It is known that micro-amounts of molybdenum favorably affect plant development. Low level causes some functional diseases in the plants. Molybdenum toxicity can rarely be observed in plants but the excess of this element causes illness in humans and animals.

The molybdenum is structural component of enzyme nitrogenase, which is actively involved in biological nitrogen fixation in root nodules of leguminous crops. Mo is also involved in protein biosynthesis through its effect on ribonuclease and alanine amino transfarase activity. It also helps in the formation and viability of pollens and development of anthers.

The critical concentration of Mo deficiency in plant is usually less than 0.1 ppm. Molybdenum deficiency resembles the N-deficiency. In plant with reticulate venation, the earlier effects of Mo-deficiency appear as chlorotic mottlings between the veins on old or middle leaves all over the surface. The Mo deficient cauliflower plants exhibit chlorotic mottling leaves shows scorching and withering starting from the margins and extending to entire lamina, this deficiency in cauliflower is termed as 'whip-tail'.

In this context the present study was conducted at Dept. of Soil Science and Agricultural Chemistry, Dr. PDKV, Akola, during 2012 -2013. Most of the soils in Yavatmal district are Vertisols, Inceptisols and Entisols with clay texture formed from basalt rock. From each tehsil minimum of twenty four surface (0-20 cm) soil samples were selected based on soil pH and $CaCO_3$ for the study. The latitude, longitude and altitude of the sampling were recorded using geographical positioning