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WAVELET BASED ANALYSIS OF SOIL NUTRIENTS OF SURENDRANAGAR DISTRICT, GUJARAT, INDIA

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ABSTRACT

This paper presents the study of soil nutrition (Phosphorus (P), Potassium (K), Zinc (Zn), Iron (Fe), Sulfur (S), Manganese (Mn), Copper (Cu), Magnesium (Mg) and Calcium (Ca)), status of agricultural dirt of Surendranagar district, Gujarat, India through continuous wavelet transform (CWT). Under the soil health card program of Government of Gujarat, all soil samples were collected by trained farmers and brought for analysis to Soil Test laboratory. As the data is composite type, the calculation of wavelet variance derived from transform to facilitate the study based on dominant peak value and scale. The values of wavelet variance of macro and micro nutrients at dominant peak with scale and their respective contribution in percentage can provide scientific basis for monitoring and controlling the tillage management.

KEYWORDS: Soil Analysis, Wavelet Transform, Wavelet Variance, Surendranagar