

Research Article

Assessment of quality of ground water for irrigation in Ahmedpur tehsil of Latur district, Maharashtra

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Summary

To study the quality of irrigation water from Ahmedpur tehsil, the present investigation was carried out during the year 2010-2011. Total three hundred ground water samples were collected from 30 villages of Ahmedpur tehsil periodically in two seasons *i.e.* summer season (May, 2010) and winter season (October, 2010). The ground water samples were analyzed for its composition and parameters like pH, EC, cations (Na^+ and K^+), anions (Cl^- , SO_4^{2-} and boron). Soil samples were also collected from the same places of Ahmedpur tehsil, with a view to studying the changes in chemical properties of soil *viz.*, pH and EC. The water samples were alkaline in nature with dominance of sodium and sulphates. Majority of the well waters were higher in salinity class, indicating moderate suitability for irrigation. Among the cations Na^+ was dominant in water followed by K^+ . The relative proportion of anions were in the sequence of $\text{SO}_4^{2-} \rightarrow \text{Cl}^-$. The boron concentration of irrigation water ranged from 0.90 (winter) to 1.07 (summer) ppm which was moderately safe (C_2) for irrigation. Irrigating the soils with such water, average pH and EC of soils were changed accordingly in summer and winter season.

Key words : Cations, Anions, Ground water samples

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