**ICP-MS Analysis of Elemental Composition in Soils and Forage Plants Irrigated with Sewage water and Bore well water**

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**Abstract**

Ensuring sufficient nutrition for livestock is crucial for maximizing livestock productivity besides bridging the widening gaps between demand and supply of green fodder. The cumbu napier hybrid grass, known for its high biomass yield per unit area and wider adaptability has played a vital role in managing the green fodder requirement to a substantial extent is the focus of the current study. Present research aims to explore the impact of sewage waste water on the growth of Cumbu Napier hybrid grass. The findings revealed that elevated levels of heavy metals viz., 37.77 ppm of lead and 10.46 ppm of tin accumulation in Cumbu Napier hybrid grass grown in soil irrigated with sewage water was recorded as compared to those irrigated with borewell water where 7.73 ppm of lead and 1.92 ppm of tin were registered. Hence, the results indicated that recycling the sewage water for high water demanding forage crops such as cumbu napier hybrid grass found to accumulate more heavy metals than bore well water. The order of mean concentrations of heavy metals in the soil so obtained was Sn>Sb>As>Pb>Cd.

**Key words: Sewage water, borewell water, elemental analysis, ICPMS, Microwave digestion technique.**