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Chicken Manure Compost as an Amendment during Phytoremediation of Mercury in Soils Using *Brachiaria dictyoneura*

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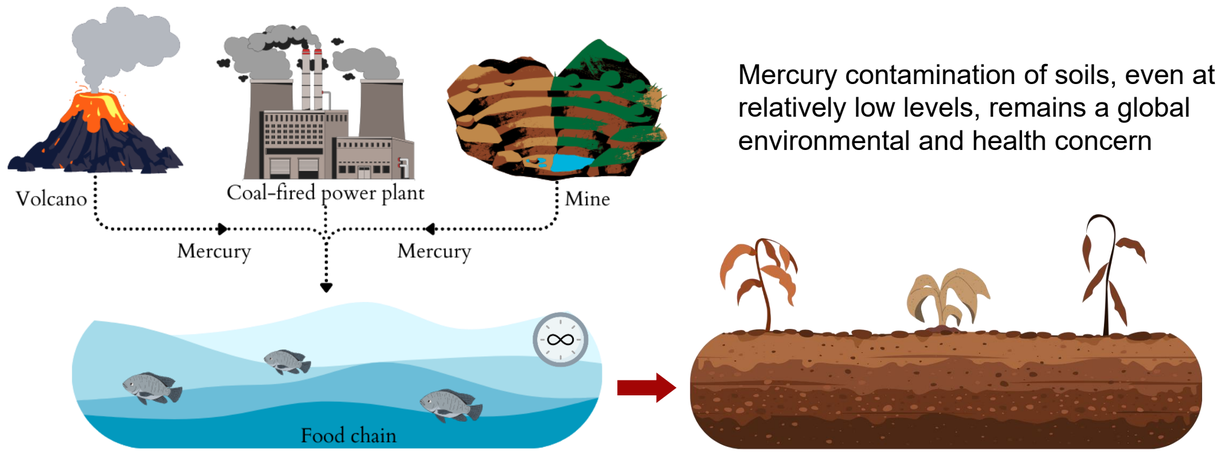
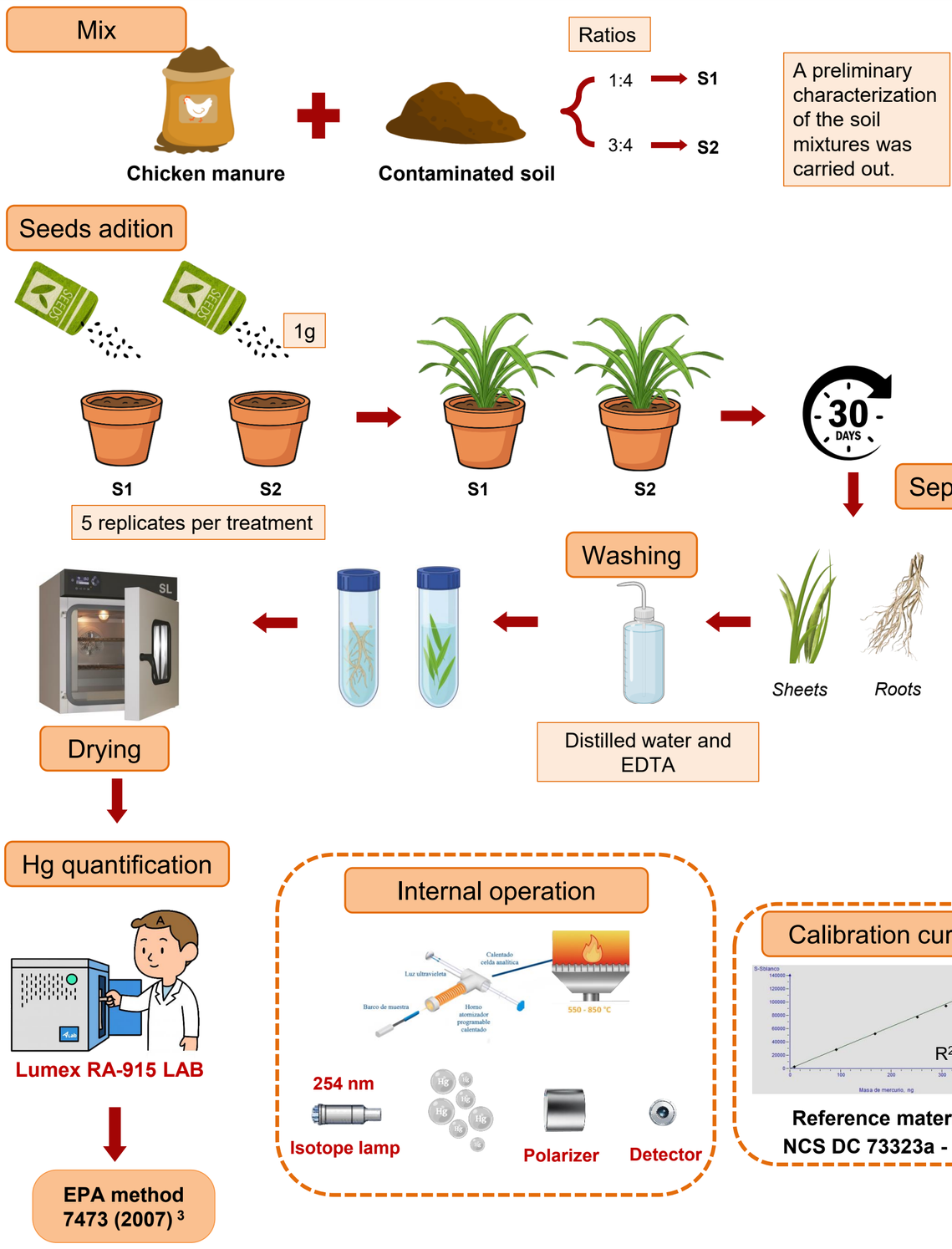
INTRODUCTION & AIM



Mercury contamination of soils, even at relatively low levels, remains a global environmental and health concern

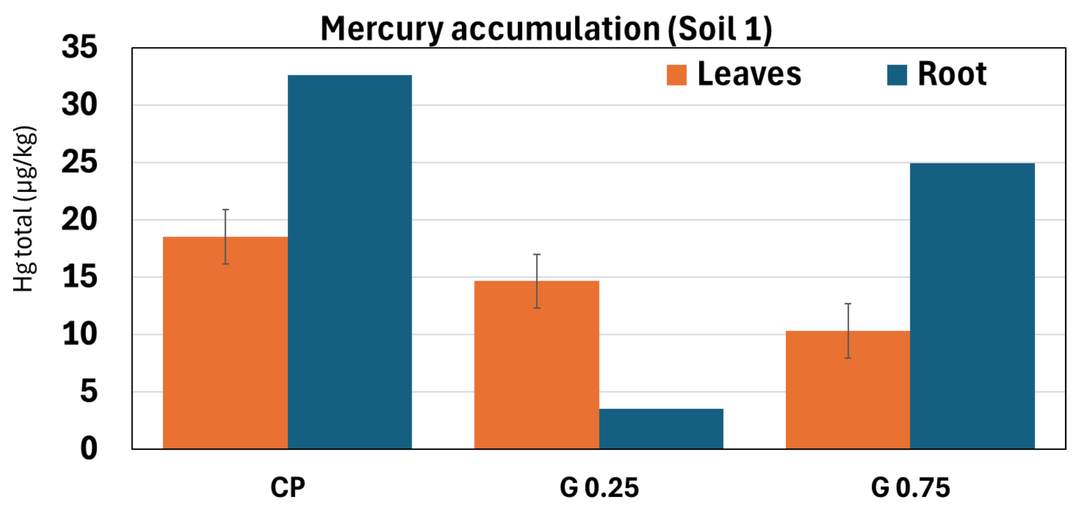
Objective: this study investigated the use of chicken manure compost to enhance mercury removal by *Brachiaria dyctioneura*, a tropical forage species with high adaptability and biomass production

METHOD

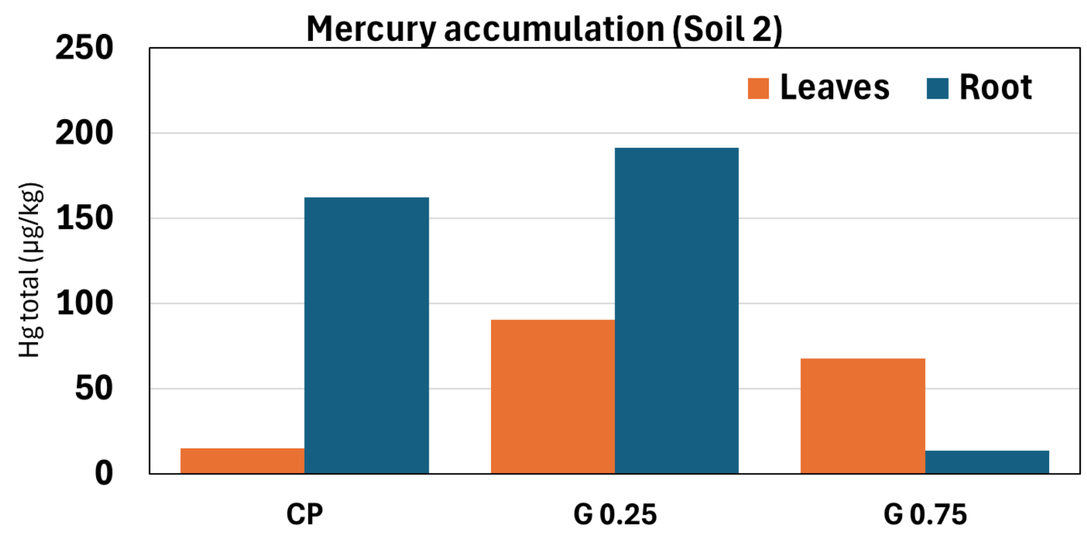


RESULTS & DISCUSSION

Mercury concentrations were 3.49–24.92 µg/kg in roots and 10.32–14.63 µg/kg in shoots in plants from Soil 1



In plants from Soil 2, mercury concentration values reached 13.44–191.53 µg/kg in roots and 67.59–90.47 µg/kg in shoots.



CONCLUSION

Results indicated that lower amendment levels enhanced mercury accumulation in shoots, favoring aerial translocation, while higher doses increased retention in roots and reduced translocation. These results suggest that amendment dosage significantly influences mercury partitioning in plants.

The findings highlight the potential of *B. dyctioneura* as a promising species for mercury phytoremediation, with chicken manure compost serving as an effective amendment to optimize remediation performance.

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