RHIZOBIOTIC: An Innovative Fertiliser That Does Not Contribute to Water Eutrophication and Allows for the Control of Ethylene in Plants

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Motivated by the Union Strategy for Biodiversity 2030, advocating for significant reductions in chemical pesticide and fertilizer use. By focusing on Rhizobacteria (PGPR) and combining them with biocompost, we invented Rhizobiotic, an eco-friendly fertilizer with reduced environmental impact and enhanced plant growth. We conducted six trials, each involving a minimum of five plant samples to ensure statistical reliability. The trials included variations of peat and compost with and without Rhizobacteria. We focused on tomatoes and lettuce, planting a total of 100 plants of each species. We evaluated growth responses and conducted analyses such as chlorophyll and carotenoid content assessments, subjective evaluations, and relative water content tests. The results demonstrated significant differences in plant growth among the various fertilizer formulations. Plants treated with Rhizobiotic fertilizer exhibited improved growth parameters compared to control groups. Analysis of chlorophyll and carotenoid content further supported these findings. This study confirms the potential of Rhizobiotic fertilizer in enhancing plant growth. The findings underscore the importance of eco-friendly fertilization strategies in sustainable agriculture practices. Further research is warranted to optimize application methods and assess long-term effects on plant health and ecosystem sustainability.

Awards Won: