



# Aislamiento y uso de microorganismos de lodos activados para la formación de biofertilizantes [

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text (article)

Analítica

This study investigated the potential of microorganisms isolated from activated sludge as biofertilizers for *Phaseolus vulgaris*. Activated sludge, a byproduct of wastewater treatment, was processed to isolate and quantify beneficial microorganisms. The efficacy of *Pseudomonas* sp. (isolated from the sludge), *Trichoderma* sp., *Rhizobium* sp., and a mixture of the three was compared against a control with sterile distilled water. The experimental phase involved 240 bean seeds distributed in 10 trays of 24 wells each. Treatments were applied every two days for 15 days, evaluating parameters such as stem growth, stem thickness, and number of leaves. The results revealed significant differences between treatments. *Pseudomonas* sp. showed the greatest effect on stem growth (20.5 cm), while *Trichoderma* sp. promoted the greatest root development (24.0 cm). The mixture of microorganisms resulted in the greatest leaf growth (5.5 cm). Individual treatments with *Pseudomonas* sp., *Rhizobium* sp., and *Trichoderma* sp. increased the water content in plants to 90%, compared to 80% in the control and mixture. This study demonstrates the potential of microorganisms from activated sludge as effective biofertilizers, offering a sustainable alternative to chemical fertilizers

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