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An Overview of Rice Husk-Derived Nanosilica's Impact on Chili Plant Growth

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Abstract: *Nanomaterials exhibit significant potential for the enhancement of plant growth, the controlled release of agro-chemicals, and the enhancement of plant disease resistance. In this investigation, the growth promotion of chile plants in greenhouses was investigated using nanosilica (10–30 nm) derived from rice husk. In a factorial design with three replications, the experiment of nanosilica treatment by foliar application was conducted at concentrations of 0, 40, 60, and 100 ppm. The chlorophyll content and plant growth characteristics were evaluated. The treatment with nanosilica resulted in an increase in the fresh weight, dried weight, and chlorophyll content. The concentration of nanosilica that was determined to be optimal was 60 ppm. Consequently, the chili plants' growth was improved by the treatment of nanosilica.*

Keywords: Nanoparticles, Plant growth, Development.