



Response of Two Oat (*Avena sativa* L.) Varieties to Foliar Spray Concentrations of Humic Acid

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Abstract

The experiment was carried out during the winter growing season of 2022–2023 in a farmer's field at Al-Zubair district, Basra, Iraq. The study aimed to evaluate the response of two oat varieties (Al-Shifa and Genzania) to four foliar spray concentrations of humic acid (0, 2, 4, and 6 mL L⁻¹, designated as H1, H2, H3, and H4, respectively) applied at the tillering and pre-flowering stages. A factorial experiment was conducted using a Randomized Complete Block Design (RCBD) with three replications. The results revealed that increasing humic acid concentrations significantly improved growth and yield traits. The highest concentration (H4, 6 mL L⁻¹) achieved the maximum values for plant height (91.51 cm), flag leaf area (22.42 cm²), number of tillers (461.2 m⁻²), number of panicles (449.8 m⁻²), grains per panicle (32.12), 1000-grain weight (49.36 g), and