

## **ABSTRAK**

### **PENGARUH PEMBERIAN UNSUR HARA ZINC TERHADAP PERTUMBUHAN REPRODUKTIF DAN HASIL TANAMAN SORGUM (*Sorghum bicolor* L.)**

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Budidaya sorgum (*Sorghum bicolor* L.) sebagai pangan alternatif menghadapi tantangan pemupukan, khususnya terkait ketersediaan seng (Zn) karena tingkat pH yang ekstrem. Penelitian ini bertujuan mengevaluasi pengaruh pemberian zinc terhadap pertumbuhan dan hasil tiga varietas sorgum. Penelitian ini dilakukan di Dusun 3 Bangun Rejo, Bandar Putih Tua, Kecamatan Anak Ratu Aji, Kabupaten Lampung Tengah pada Maret 2025 – Maret 2026. Rancangan percobaan yang digunakan pada penelitian ini yaitu Rancangan Acak Kelompok (RAK) faktorial 3×3 dengan faktor varietas (Super01, SR-24 01, SR-24 02) dan dosis zinc micro (0, 20, dan 40 kg/ha). Analisis data dilakukan dengan analisis ragam ( $\alpha$  5%), adapun analisis dilakukan menggunakan software SAS 9.4. Hasil penelitian menunjukkan bahwa varietas Super01 memiliki pertumbuhan vegetatif terbaik sedangkan SR-24 02 unggul pada komponen hasil generatif. Pemberian zinc 20 kg/ha menghasilkan tinggi tanaman tertinggi (2,48 m), sedangkan dosis 40 kg/ha menghasilkan lingkaran batang terbesar (14,00 cm), bobot segar malai tertinggi (204,33 g).

Kata kunci: hasil, pertumbuhan, varietas, sorgum, zinc.

## ABSTRACT

### THE EFFECT OF ZINC FERTILIZER APPLICATION ON REPRODUCTIVE GROWTH AND YIELD OF SORGHUM (*Sorghum bicolor* L.)

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*The cultivation of sorghum (*Sorghum bicolor* L.) as an alternative food source faces challenges related to fertilization, particularly regarding the availability of zinc (Zn) due to extreme pH levels. This study aims to evaluate the effect of zinc application on the growth and yield of three sorghum varieties. The study was conducted in Dusun 3 Bangun Rejo, Bandar Putih Tua, Anak Ratu Aji Subdistrict, Central Lampung Regency, from March 2025 to March 2026. The experimental design used in this study was a 3×3 factorial randomized block design (RBD) with the factors of variety (Super01, SR-24 01, SR-24 02) and micro-zinc application rates (0, 20, and 40 kg/ha). Data analysis was performed using analysis of variance ( $\alpha = 5\%$ ), and the analysis was conducted using SAS 9.4 software. The results showed that the Super01 variety exhibited the best vegetative growth, while SR-24 02 outperformed the others in terms of generative yield components. The application of 20 kg/ha of zinc resulted in the tallest plant height (2.48 m), while the 40 kg/ha dose produced the largest stem circumference (14.00 cm) and the highest fresh panicle weight (204.33 g).*

**Keywords:** growth, sorghum, varieties, zinc, yield.