

INTISARI

Sorgum (*Sorghum bicolor*) merupakan tanaman serealialia asal Afrika yang kaya nutrisi dan telah dibudidayakan sejak lama di Indonesia. Sorgum dapat dikembangkan sebagai alternatif pangan dan energi yang ramah lingkungan, karena mampu tumbuh di lahan marginal dengan input kimia yang rendah. Penelitian ini bertujuan untuk mengevaluasi pengaruh berbagai jenis pupuk organik terhadap pertumbuhan dan hasil sorgum varietas Samurai. Penelitian dilaksanakan di Desa Logandeng, Kecamatan Kapanewon, Kabupaten Gunungkidul, Daerah Istimewa Yogyakarta pada September–Desember 2024. Penelitian menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan empat blok sebagai ulangan. Perlakuan penelitian adalah pupuk kandang sapi, pupuk kandang kambing, pupuk kandang ayam, pupuk organomineral, dan NPK sebagai kontrol. Hasil penelitian menunjukkan bahwa pupuk kandang ayam memberikan pengaruh paling signifikan terhadap tinggi tanaman, diameter batang, bobot segar dan kering batang, bobot daun khas, laju asimilasi bersih, jumlah biji per malai, bobot 1000 biji kering, dan bobot biji per tanaman, sedangkan pupuk kandang sapi menghasilkan jumlah daun, panjang akar, indeks luas daun, dan laju pertumbuhan tanaman tertinggi. Pupuk kandang ayam terbukti lebih efektif meningkatkan pertumbuhan dan hasil sorgum, serta memperbaiki sifat fisik dan kimia tanah, sehingga pupuk kandang ayam direkomendasikan sebagai alternatif pupuk ramah lingkungan karena menghasilkan bobot biji tanaman sebesar 68,42 g per tanaman dan tidak berbeda nyata dengan NPK dan pupuk kandang sapi, masing-masing sebesar 63,61 g dan 62,86 g.

Kata kunci: Pupuk organik, Samurai, Sorgum, Varietas.

ABSTRACT

Sorghum (Sorghum bicolor) is a nutrient-rich cereal crop originating from Africa that has been cultivated for centuries in Indonesia. Sorghum can be developed as an environmentally friendly alternative for food and energy due to its ability to grow in marginal lands with low chemical input. This study aimed to evaluate the effects of various organic fertilizers on the growth and yield of the Samurai sorghum variety. The research was conducted in Logandeng Sub-District, Kapanewon District, Gunungkidul Regency, Yogyakarta Special Region, from September to December 2024. The research used a Randomized Complete Block Design (RCBD) with four blocks as replications. The treatments used organic fertilizer made from manure of cattle, goats, and chickens, as well as organomineral fertilizer and NPK as a control. The results showed that chicken manure had the most significant effect on plant height, stem diameter, fresh and dry stem weight, characteristic leaf weight, net assimilation rate, number of seeds per panicle, 1000-grain weight, and seed weight per plant. Cow manure resulted in the highest number of leaves, root length, leaf area index, and plant growth rate. Chicken manure has proven to be more effective in improving the growth and yield of sorghum, as well as enhancing the physical and chemical properties of the soil. Therefore, it is recommended as an environmentally friendly fertilizer alternative, as it produced a seed weight of 68.42 g per plant, which was not significantly different from NPK and cow manure, which yielded 63.61 g and 62.86 g per plant, respectively.

Keywords: *Organic fertilizer, Samurai, Sorghum, Variety.*