

PENGARUH UMUR PANEN TERHADAP KARAKTERISTIK MORFOLOGI DAN PRODUKSI BIOMASSA FODDER PADI (*Oryza sativa* L.)

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh umur panen terhadap karakteristik morfologi dan produksi biomassa *fodder* padi (*Oryza sativa* L.). Penelitian dilakukan pada bulan Oktober 2023 sampai dengan Februari 2024 di Green House PT Sembada Sinergi Farm, Kalasan, Sleman dan sampel dianalisis di Laboratorium Hijauan Makanan Ternak dan Pastura, Fakultas Peternakan, Universitas Gadjah Mada, Yogyakarta. Materi yang digunakan adalah biji padi (*Oryza sativa* L.) varietas Inpari-32 dan nampan ukuran 50x25x5 cm sebagai tempat media penanaman. Masing-masing 500 g/nampan biji padi ditanam pada 9 nampan dibagi menjadi 3 perlakuan umur panen yaitu 8, 10, dan 12 hari setelah tanam (HST) dengan pengulangan 3 kali. Data karakteristik morfologi meliputi tinggi tanaman, jumlah daun, dan panjang akar ketika masa panen pada setiap nampan diambil sebanyak 5 tanaman secara acak. Data produksi biomassa yang meliputi produksi segar, produksi bahan kering (BK) dan produksi bahan organik (BO) diukur tiap nampan. Data dianalisis variansi sesuai Rancangan Acak Lengkap pola searah dan dilanjut dengan uji *Duncan's New Multiple Range Test* (DMRT) apabila diperoleh perbedaan signifikan. Hasil penelitian menunjukkan bahwa *fodder* padi umur panen 12 hari menghasilkan morfologi (tinggi tanaman, jumlah daun, dan panjang akar) dan produksi biomassa (produksi segar, produksi bahan kering, dan produksi bahan organik) lebih tinggi ($P < 0,05$) dibanding dengan umur panen 10 dan 8 hari. Produksi bahan kering *fodder* padi masing-masing 3,38 kg/m², 4,22 kg/m², dan 5,61 kg/m² meningkat ($P < 0,05$) sesuai umur panen 8, 10, dan 12 hari. Berdasarkan penelitian dapat disimpulkan bahwa umur panen 12 hari memiliki morfologi dan produksi biomassa *fodder* padi (*Oryza sativa* L.) paling baik.

(Kata kunci: Umur panen, Karakteristik morfologi, Produksi biomassa, *Fodder* padi, Hidroponik)

THE EFFECT OF HARVESTING AGE ON MORPHOLOGICAL CHARACTERISTICS AND BIOMASS PRODUCTION OF FODDER RICE (*Oryza sativa* L.)

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ABSTRACT

This study aims to determine the effect of harvesting age on morphological characteristics and biomass production of *fodder rice* (*Oryza sativa* L.). The research was conducted from October 2023 to February 2024 in the Green House of PT Sembada Sinergi Farm, Kalasan, Sleman and the samples were analyzed at the Laboratory of Forage and Pasture, Faculty of Animal Husbandry, Gadjah Mada University, Yogyakarta. The materials used were rice seeds (*Oryza sativa* L.) variety Inpari-32 and 50x25x5 cm trays as planting media. Each 500 g/tray of rice seeds were planted in 9 trays divided into 3 treatments of harvesting age, namely 8, 10, and 12 days after planting (DAP) with repetition 3 times. Data on morphological characteristics including plant height, number of leaves, and root length at harvest time in each tray were taken as many as 5 plants randomly. Biomass production data including fresh production, dry matter production and organic matter production were measured in each tray. Data were analyzed for variance according to a completely randomized design in a unidirectional pattern and continued with *Duncan's New Multiple Range Test* (DMRT) if significant differences were obtained. The results showed that *fodder rice* harvesting age of 12 days produced higher morphology (plant height, number of leaves, and root length) and biomass production (fresh production, dry matter production, and organic matter production) ($P < 0,05$) compared to harvest age of 10 and 8 days. Rice *fodder* dry matter production of 3,38 kg/m², 4,22 kg/m², and 5,61 kg/m² increased ($P < 0,05$) with harvesting ages of 8, 10, and 12 days. Based on the research, it can be concluded that the 12 day harvesting age has the best morphology and biomass *fodder rice* (*Oryza sativa* L.) production.

(Key Words: Harvesting age, Morphological characteristics, Biomass production, *Fodder rice*, Hidroponic)