

**PENGARUH UMUR PANEN TERHADAP MORFOLOGI, PRODUKSI
BIOMASSA, KANDUNGAN NUTRIEN DAN KECERNAAN *IN VITRO*
TANAMAN JAGUNG (*Zea mays*)**

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh perbedaan umur panen terhadap morfologi, produksi biomassa, kandungan nutrisi dan pencernaan *in vitro* tanaman jagung (*Zea mays*). Penelitian ini dilakukan selama 12 minggu di lahan penanaman milik PT. Agromix Lestari di Grogolan, Umbulmartani, Ngemplak, Sleman, Daerah Istimewa Yogyakarta. Luas lahan yang digunakan yaitu 250 m². Bibit jagung (*Zea mays*) hibrida varietas *Pioneer 36*[®] ditanam dengan pola tanam ganda dengan aplikasi jarak tanam 90 x 20 cm pada 6 petak masing-masing berukuran 2 x 3 m dengan jarak antar petak 0,5 m. Perlakuan pemanenan dilakukan pada umur tanaman 70 hari pada 3 petak tanaman dan 3 petak lainnya dipanen pada 84 hari setelah tanam dan dilakukan dengan memotong seluruh bagian tanaman. Morfologi tanaman yang diamati adalah tinggi tanaman (cm), panjang tanaman (cm), panjang daun (cm), lebar daun (cm) dan jumlah daun (helai). Variabel produksi yaitu produksi segar (kg/ha) dan kandungan nutrisi meliputi kandungan bahan kering (BK), bahan organik (BO), protein kasar (PK), serat kasar (SK), lemak kasar (LK), bahan ekstrak tanpa nitrogen (BETN) serta analisis pencernaan secara *in vitro*. Data yang diperoleh selanjutnya dianalisis dengan metode analisis *T-Test*. Analisis statistik dilakukan dengan menggunakan bantuan *software* personal komputer *Statistical Product and Service* (SPSS). Hasil penelitian menunjukkan umur panen 84 hari meningkatkan (<0,05) terhadap produksi biomassa segar, BK dan BO, kandungan BK dan SK, tetapi menurunkan kandungan BETN dan pencernaan BK dan BO. Berdasarkan penelitian dapat disimpulkan bahwa umur panen terbaik yang digunakan pada tanaman jagung sebagai hijauan pakan ternak yakni umur 70 hari.

Kata kunci : *Zea mays*, Umur panen, Morfologi, Produksi biomassa, Kandungan Nutrien, Pencernaan secara *in vitro*

THE EFFECT OF HARVESTING AGE ON MORPHOLOGY, BIOMASS PRODUCTION, NUTRIENTS CONTENT AND IN VITRO DIGESTIBILITY OF MAIZE PLANT (*Zea mays*)

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ABSTRACT

This study aims to determine the effect of differences in harvest age on morphology, biomass production, nutrient content and in vitro digestibility of corn plants (*Zea mays*). This research was conducted for 12 weeks on planting land owned by PT. Agromix Lestari in Grogolan, Umbulmartani, Ngemplak, Sleman, Special Region of Yogyakarta. The land area used is 250 m². Corn seedlings (*Zea mays*) hybrid of the Pioneer 36® variety are planted with a double planting pattern with the application of planting spacing of 90 x 20 cm on 6 plots measuring 2 x 3 m each with a distance between plots of 0.5 m. The harvesting treatment was carried out at the age of 70 days on 3 plots and the other 3 plots were harvested at 84 days after planting and carried out by cutting off all parts of the plant. The observed plant morphology were plant height (cm), plant length (cm), leaf length (cm), leaf width (cm) and number of leaves (strands). Production variables are fresh production (kg / ha) and nutrient content including dry matter content (DM), organic matter (OM), crude protein (CP), crude fiber (CF), crude fat (EE), nitrogen free extract (NFE) and digestibility analysis in vitro. The data obtained are then analyzed by the T-Test analysis method. Statistical analysis is carried out using the help of personal computer software Statistical Product and Service (SPSS). The results showed that the harvest age of 84 days increased (<0.05) the production of fresh biomass, DM and OM, DM and CF content, but decreased NFE content and digestibility of DM and OM. Based on research, it can be concluded that the best harvest age used on corn plants as forages is 70 days.

Keywords : *Zea mays*, Harvesting age, Plant morphology, Biomass production, Nutrient Content, *In vitro* digestibility