

PENGARUH UMUR POTONG JAGUNG (*Zea mays*) VARIETAS PIONEER 27 TERHADAP MORFOLOGI, PRODUKSI BIOMASSA, KANDUNGAN BAHAN KERING, DAN BAHAN ORGANIK

Vania Nirmala Sari
21/481028/PT/09018

INTISARI

Kebutuhan hijauan pakan semakin meningkat sehingga perlu dilakukan peningkatan penyediaan hijauan pakan. Tanaman jagung (*Zea mays*) varietas Pioneer 27 memiliki pertumbuhan dan produksi yang optimal. Umur potong dapat mempengaruhi pertumbuhan, produksi, dan kualitas nutrisi pada tanaman. Penelitian ini bertujuan mengetahui pengaruh umur potong jagung varietas Pioneer 27 terhadap morfologi, produksi biomassa, kandungan bahan kering, dan bahan organik. Penelitian dilakukan pada bulan Januari sampai dengan April 2024 di lahan milik Koperasi PPKDY di Tegalrejo, Sleman dan di Laboratorium Hijauan Makanan Ternak, Fakultas Peternakan, Universitas Gadjah Mada. Penelitian ini menggunakan benih tanaman jagung hibrida varietas Pioneer 27 ditanam dengan pola tanam tunggal. Penanaman dilakukan dengan jarak tanam 70 x 30 cm pada 6 plot yang masing-masing berukuran 5 x 5 m dan jarak antar plot 0,5 m. Perlakuan pemotongan dilakukan pada umur 75 hari dan 90 hari setelah tanam dengan ulangan petak sebanyak 3 kali. Parameter yang diamati yaitu morfologi tanaman, produksi biomassa, kandungan bahan kering, dan kandungan bahan organik. Data yang diperoleh kemudian dianalisis dengan *t-test*. Analisis statistik dilakukan dengan bantuan *software* personal komputer *Statistical Product and Service* (SPSS). Hasil penelitian menunjukkan tidak adanya perbedaan pada parameter morfologi tanaman dan produksi biomassa, namun pada umur potong 90 hari menghasilkan kandungan bahan kering dan kandungan bahan organik yang lebih tinggi dibanding umur potong 75 hari ($P < 0,05$). Kesimpulan yang dapat diambil yaitu tanaman jagung varietas Pioneer 27 lebih baik dipotong pada umur 90 hari.

Kata kunci: Kandungan bahan kering dan bahan organik, Morfologi, Pioneer 27, Produksi biomassa, *Zea mays*

**THE EFFECT OF HARVEST AGE OF CORN (*Zea mays*) VARIETY
PIONEER 27 ON MORPHOLOGY, BIOMASS PRODUCTION, DRY
MATTER CONTENT, AND ORGANIC MATTER.**

Vania Nirmala Sari
21/481028/PT/09018

ABSTRACT

The need for forage feed is increasing so it is necessary to increase the supply of forage feed. Corn (*Zea mays*) variety Pioneer 27 has optimal growth and production. Cutting age can affect growth, production, and nutritional quality in plants. This study was conducted to determine the effect of harvest age of corn (*Zea mays*) variety Pioneer 27 on morphology, biomass production, dry matter content, and organic matter. The study was conducted from January to April 2024 on land owned by PPKDY Cooperative in Tegalrejo, Sleman and at the Laboratory of Forage for Animal Food, Faculty of Animal Science, Gadjah Mada University. This study used hybrid corn seeds of the Pioneer 27 variety planted with a single planting pattern. Planting was carried out with a planting distance of 70 x 30 cm in 6 plots, each measuring 5 x 5 m and a distance between plots of 0.5 m. The cutting treatment was carried out at the age of 75 days and 90 days after planting with 3 replications of the plot. The parameters observed were plant morphology, biomass production, dry matter content, and organic matter content. The data obtained were then analyzed by t-test. Statistical analysis was carried out with the help of personal computer software Statistical Product and Service (SPSS). The results showed no differences in plant morphological parameters and biomass production, but at the age of 90 days cut, the dry matter content and organic matter content were higher than at the age of 75 days cut ($P < 0.05$). The conclusion that can be drawn is that the corn variety Pioneer 27 is better cut at the age of 90 days.

Keywords: Dry matter and organic matter content, Morphology, Pioneer 27, Biomass production, *Zea mays*