

## **PENGARUH UMUR POTONG TERHADAP MORFOLOGI DAN PRODUKSI BIOMASSA PADA TANAMAN KACANG SACHA INCHI (*Plukenetia volubilis* L.)**

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### **INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh umur potong yang berbeda terhadap karakteristik morfologi dan produksi biomassa tanaman kacang sachu inchi (*Plukenetia volubilis* L.). Penelitian ini dilaksanakan pada bulan Januari hingga Mei 2024 di kebun percobaan Hijauan Makanan Ternak dan Pastura Fakultas Peternakan Universitas Gadjah Mada. Analisis kandungan bahan kering (BK) dan bahan organik (BO) dilakukan di Laboratorium Hijauan Makanan Ternak dan Pastura Fakultas Peternakan Universitas Gadjah Mada. Materi yang digunakan adalah bibit tanaman kacang sachu inchi (*Plukenetia volubilis* L.) dari petani Solo dengan tinggi berkisar 40 cm dan umur sekitar 3 minggu. Perlakuan umur potong tanaman kacang sachu inchi (*Plukenetia volubilis* L.) meliputi umur potong 90, 105, dan 120 hari setelah tanam (HST). Variabel yang diamati adalah morfologi, produksi biomassa, dan kandungan bahan kering (BK) serta bahan organik (BO). Data yang diperoleh selama penelitian dianalisis menggunakan analisis variansi (ANOVA) mengikuti rancangan percobaan pola searah dan dilanjut dengan uji *Duncan's New Multiple Range Test* (DMRT) jika signifikan. Hasil penelitian menunjukkan bahwa semakin tua umur potong akan meningkatkan morfologi, produksi biomassa, serta kandungan BK dan BO ( $P < 0,05$ ). Hasil pengamatan warna daun kacang sachu inchi (*Plukenetia volubilis* L.) menggunakan *munsell color chart* menunjukkan pada umur potong 90 HST memiliki kode warna 6/8 5GY *strong yellow green*, sedangkan pada umur potong 105 dan 120 HST memiliki kode warna 6/8 7.5GY *strong yellow green*. Berdasarkan penelitian dapat disimpulkan bahwa tanaman kacang sachu inchi (*Plukenetia volubilis* L.) yang dipotong pada umur 120 HST menunjukkan hasil tertinggi.

Kata kunci: Bahan kering, Bahan organik, Morfologi tanaman, Produksi biomassa, Umur potong.

**THE EFFECT OF CUTTING AGE ON MORPHOLOGY  
AND BIOMASS PRODUCTION IN  
INCHI SACHA NUT (*Plukenetia volubilis* L.)**

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**ABSTRACT**

This study aims to determine the effect of different cutting ages on the morphological characteristics and biomass production of inchi sacha bean (*Plukenetia volubilis* L.). This research was conducted from January to May 2024 in the experimental garden of Forage for Animal Food and Pastura, Faculty of Animal Husbandry, Gadjah Mada University. Analysis of Dry Matter (DM) and Organic Matter (OM) content was conducted at the Laboratory of Forage for Animal Food and Pasture, Faculty of Animal Husbandry, Gadjah Mada University. The material used was inchi sacha bean (*Plukenetia volubilis* L.) seedlings from Solo farmers with a height of about 40 cm and an age of about 3 weeks. The treatment of cutting age of inchi sacha bean (*Plukenetia volubilis* L.) includes cutting age of 90, 105, and 120 Days After Planting (HST). The variables observed were morphology, measurement of biomass production, and the content of Dry Matter (DM) and Organic Matter (OM). Data obtained during the study were analyzed using analysis of variance (ANOVA) unidirectional pattern experimental design and continued with Duncan's New Multiple Range Test (DMRT) if significant. The results showed that the older the cutting age will increase morphology, biomass production, and the content of Dry Matter and Organic Matter ( $P < 0.05$ ). The results of observations of the color of the leaves of inchi sacha beans (*Plukenetia volubilis* L.) using the munsell color chart show that at the age of cutting 90 HST has a color code of 6/8 5GY strong yellow green, while at the age of cutting 105 and 120 HST has a color code of 6/8 7.5GY strong yellow green. Based on the research, it can be concluded that inchi sacha bean (*Plukenetia volubilis* L.) plants cut at the age of 120 HST showed the highest yield.

Key words: Biomass production, Cutting age, Dry matter, Organic matter, Plant morphology.