PENGARUH PERBEDAAN JARAK TANAM TERHADAP PERTUMBUHAN, KANDUNGAN NUTRIEN, DAN PRODUKSI ALFALFA (*Medicago sativa* L.)

Nur Hasanah
15/383793/PT/07066

INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh jarak tanam terhadap pertumbuhan, kandungan nutrien, dan produksi alfalfa (*Medicago sativa* L.). Materi yang digunakan dalam penelitian ini yaitu bibit alfalfa berumur 3 bulan dan pupuk kandang. Alfalfa ditanam pada jarak tanam 25x30 cm dan 50x30 cm pada plot berukuran 4x1,5 meter yang masing-masing dibagi menjadi dua bagian. Kombinasi perlakuan ini diulang 3 kali. Variabel yang diamati adalah pertumbuhan (tinggi tanaman), produksi (segar, bahan kering, bahan organik, dan protein kasar), serta kandungan nutrien (bahan kering (BK), bahan organik (BO), protein kasar (PK), serat kasar (SK), lemak kasar (LK), bahan ekstrak tanpa nitrogen (BETN) dan *total digestible nutrients* (TDN)). Data penelitian dianalisis dengan analisis variansi *Independent T-Test.* Alfalfa di panen pada umur 5 pekan setelah tanam. Hasil penelitian menunjukkan perbedaan jarak tanam berpengaruh nyata ($P<0,05$) terhadap produksi segar, produksi bahan kering (BK), bahan organik (BO), dan protein kasar (PK). Alfalfa dengan jarak tanam 25x30 cm memiliki produksi segar, BK, BO, dan PK lebih tinggi dibandingkan alfalfa pada jarak tanam 50x30 cm. Tinggi tanaman dan kandungan nutrien (BK, BO, PK, SK, LK, BETN, dan TDN) antar kedua jarak tanam pada riset ini tidak berbeda nyata.

Kata kunci : Jarak tanam, *Medicago sativa*, Nutrien, Pertumbuhan, Produksi biomassa.

THE EFFECT OF PLANT SPACING ON GROWTH, NUTRIENT CONTENT, AND PRODUCTION OF ALFALFA (*Medicago sativa* L.)

Nur Hasanah
15/383793/PT/07066

ABSTRACT

The aimed of this study was to determine the effect of plant spacing on the growth, production, and nutrient content of alfalfa (*Medicago sativa* L.). The material used in this study were alfalfa seedlings aged 3 months and manure. Alfalfa was planted at a spacing of 25x30 cm and 50x30 cm in the plots with size 4x1.5 meters, and each plot was divided into two parts. The combination of this treatment was repeated three times. The variables observed were growth (plant height), production (fresh, dry matter, organic matter, and crude protein), and nutrient content (dry matter (DM), organic matter (OM), crude protein (CP), crude fiber (CF), ether extract (EE), nitrogen free extract (NFE), and total digestible nutrients (TDN)). Data obtained were analyzed statistically using Independent T-Test. The results showed that the plant spacing significantly affected ($P<0.05$) on fresh, dry matter, organic matter, and crude protein production. Alfalfa with a spacing of 25x30 cm has a higher fresh, dry matter, organic matter, and crude protein production than alfalfa at the spacing of 50x30 cm. Plant height and nutrient content (DM, OM, CP, CF, EE, NFE, and TDN) were not significantly different between the two spacing in this study. Plant spacing was not significantly different with alfalfa's high and nutrient content.

Keywords: Growth, *Medicago sativa* L., Nutrient, Plant spacing, Production.