Agronomi, Produksi dan Nilai Kecernaan Leguminosa *Indigofera zollingeriana* yang Diberi Pemupukan N, P, dan K dan Inokulasi *Fungi Mikoriza Arbuskula* cv. *Glomus manihottis* di Lahan Ultisol Kepulauan Mentawai

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PADANG, 2025

AGRONOMI, PRODUKSI DAN NILAI KECERNAAN LEGUMINOSA *Indigofera zollingeriana* YANG DIBERI PEMUPUKAN N,P, DAN K DAN INOKULASI *Fungi Mikoriza Arbuskula* cv. *Glomus manihottis* DI LAHAN ULTISOL KEPULAUAN MENTAWAI

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RINGKASAN

Penelitian ini bertujuan untuk mengevaluasi pengaruh penambahan FMA dan pupuk N, P, dan K terhadap agronomi, produksi dan Analisa kandungan dan kecernaan Bahan Organik, Bahan Kering, Protein Kasar, *Indigofera zollingeriana sp*. yang ditanam di lahan ultisol. Perlakuan yang diberikan terdiri dari perlakuan P0 (100% pupuk N,P,dan K+Pupuk kandang tanpa FMA), perlakuan P1 (100% pupuk N,P,dan K+Pupuk kandang+10 g FMA), perlakuan P2 (75% pupuk N,P,dan K+Pupuk kandang+10 g FMA), perlakuan P3 (50% pupuk N,P, dan K+Pupuk kandang+10 g FMA), dan perlakuan P4 (25% pupuk N,P,dan K+Pupuk kandang+10 g FMA). Peubah yang diamati dalam penelitian ini adalah tinggi tanaman, panjang daun, lebar daun, batang, jumlah daun, produksi segar, produksi kering, dan kecernaan zat-zat makanan. Berdasarkan hasil penelitian menunjukkan hasil berbeda tidak nyata (P>0,05) terhadap agronomi, produksi dan analisa kandungan dan kecernaan zat makanan. Hasil yang terbaik terdapat P1 tinggi tanaman 71,05 cm, panjang daun 6,07 cm, lebar daun 2,48 cm, diameter batang 0,69 cm, namun pada jumlah daun perlakuan P2 terbanyak 356,12 helai, produksi segar 8,96 ton/ha/panen, produksi bahan kering 2,18 ton/ha/panen, namun hasil P1 tertinggi KcBK 64,06%, KcBO 69,82%, dan KcPK 70%. Kesimpulan bahwa pemberian dosis pupuk N, P, dan K sebanyak 25% yang diinokulasi dengan 10 g FMA mampu mempertahankan produktivitas *Indigofera zollingeriana sp*. di lahan ultisol.

Kata kunci : Agronomi, *Indigofera zollingeriana*, FMA, Pupuk NPK, Ultisol.

AGRONOMY, PRODUCTION, AND DIGESTIBILITY VALUE OF LEGUME *Indigofera zollingeriana* SUPPLEMENTED WITH N, P, AND K FERTILIZATION AND INOCULATION OF ARBUSCULAR MYCORRHIZAL FUNGI (*Glomus manihottis* cv.) ON ULTISOL SOIL IN THE MENTAWAI ISLANDS

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SUMMARY

This study aimed to evaluate the effect of Arbuscular Mycorrhizal Fungi (*Glomus manihottis* cv.) and N, P, and K fertilization on the agronomy, production, and analysis of organic matter, dry matter, and crude protein content and digestibility of *Indigofera zollingeriana* cultivated on ultisol soil. The treatments consisted of P0 (100% N, P, and K fertilizer + manure without AMF), P1 (100% N, P, and K fertilizer + manure + 10 g AMF), P2 (75% N, P, and K fertilizer + manure + 10 g AMF), P3 (50% N, P, and K fertilizer + manure + 10 g AMF), and P4 (25% N, P, and K fertilizer + manure + 10 g AMF). The observed variables were plant height, leaf length, leaf width, stem diameter, number of leaves, fresh yield, dry yield, and nutrient digestibility. The results indicated no significant differences ($P>0.05$) among treatments in terms of agronomy, production, and nutrient digestibility analysis. The best results were obtained with P1, which produced a plant height of 71.05 cm, leaf length of 6.07 cm, leaf width of 2.48 cm, and stem diameter of 0.69 cm. However, the highest number of leaves was found in P2 (356.12 leaves), fresh yield of 8.96 tons/ha/harvest, and dry matter yield of 2.18 tons/ha/harvest. P1 also produced the highest digestibility values: dry matter digestibility (64.06%), organic matter digestibility (69.82%), and crude protein digestibility (70%). It is concluded that the application of 25% N, P, and K fertilizer combined with 10 g AMF (*Glomus manihottis* cv.) inoculation was able to maintain the productivity of *Indigofera zollingeriana* on ultisol soil.

Keywords: Agronomy, *Indigofera zollingeriana*, AMF, NPK fertilizer, Ultisol.