

PENGARUH LEVEL PUPUK UREA DAN UMUR PANEN TERHADAP
PRODUKTIVITAS DAN KADAR FLAVONOID HIJAUAN
KEMBANG TELANG (*Clitoria ternatea* L)

INTISARI

Wardi
20/466795/PPT/01137

Tanaman kembang telang (*Clitoria ternatea* L) termasuk jenis leguminosa yang berpotensi sebagai pakan ternak. Penelitian ini bertujuan untuk mengetahui pertumbuhan, produktivitas, kandungan nutrisi, tanin, lignin, flavonoid, pencernaan bahan kering (KcBK) dan pencernaan bahan organik (KcBO) pada pemberian level pupuk urea dan umur panen yang berbeda hijauan kembang telang. Rancangan penelitian ini menggunakan petak terbagi (*split plot*) dengan perlakuan 3x3 yang terdiri dari petak utama (*main plot*) kadar urea (0 kg/ha, 100 kg/ha, dan 200 kg/ha) dan anak petak (*sub plot*) umur panen 30, 45, dan 60 hari setelah tanam (HST) dengan 3 ulangan. Biji kembang telang disemaikan selama 6 minggu. Benih kembang telang yang berumur 6 minggu dipindahkan ke lahan dengan lubang tanam kedalaman antara 7 – 10 cm dengan jarak tanam 75 x 75 cm. Parameter yang diamati adalah pertumbuhan morfologi (tinggi tanaman, diameter batang, jumlah daun, dan jumlah cabang), produktivitas (berat segar, berat kering dan protein kasar), kandungan nutrisi, kadar flavonoid, tanin, lignin, bahan kering (KcBK) dan pencernaan bahan organik (KcBO). Data penelitian dianalisis dengan analisis varian (ANOVA), uji perbedaan antar rerata dilakukan dengan *Duncan's Multiple Range* (DMRT). Kenaikan level pupuk pada hijauan kembang telang berpengaruh signifikan ($P < 0,05$) terhadap pertumbuhan, produktivitas, protein kasar (PK), serat kasar (SK), lemak kasar (LK), dan lignin, namun tidak signifikan ($P > 0,05$) terhadap bahan organik (BO), tanin, flavonoid, KcBK dan KcBO. Umur panen berpengaruh signifikan ($P < 0,05$) terhadap pertumbuhan, produktivitas, SK, LK, dan lignin, namun tidak berpengaruh signifikan ($P > 0,05$) terhadap PK, BO, tanin, flavonoid, KcBK dan KcBO. Adanya interaksi ($P < 0,05$) antara level pupuk dan umur panen terhadap pertumbuhan dan produktivitas, tetapi tidak ada interaksi ($P > 0,05$) terhadap PK, SK, LK, BO, flavonoid, tanin, KcBK dan KcBO. Disimpulkan bahwa kembang telang untuk pertumbuhan, produktivitas, PK, SK, LK, dan lignin meningkat sejalan dengan kenaikan level pupuk, namun untuk BO, tanin, flavonoid, KcBK dan KcBO menunjukkan penurunan. Pertumbuhan, produktivitas, BK, SK, LK, dan lignin meningkat sejalan dengan bertambahnya umur panen. Namun untuk PK, BO, tanin, flavonoid, KcBK dan KcBO menunjukkan penurunan. Kadar flavonoid tertinggi terjadi pada perlakuan 200 kg/ha dengan umur panen 30 HST (1,48%) dan kadar tanin tertinggi pada perlakuan 100 kg/ha dengan umur panen 30 HST (4,49%).

Kata kunci: *Clitoria ternatea* L, Flavonoid, Pencernaan, Pupuk Urea, Produktivitas

EFFECT OF UREA FERTILIZER LEVELS AND DEFOLIATION TIME
ON PRODUCTIVITY AND FLAVONOID LEVELS IN FORAGE
BUTTERFLY PEA (*Clitoria ternatea* L)

ABSTRACT

Wardi

20/466795/PPT/01137

Butterfly pea (*Clitoria ternatea* L.) is a leguminous species that has potential as animal feed. This study aims to determine the growth, productivity, nutrient content, tannins, lignin, flavonoids, dry matter digestibility (DMD) and organic matter digestibility (OMD) in the application of urea fertilizer levels and defoliation time of butterfly pea forage. The design of this study used a split plot with 3x3 treatment consisting of the main plot (main plot) urea content (0 kg/ha, 100 kg/ha, and 200 kg/ha) and sub-plots (sub plots) of harvest age. 30, 45, and 60 days after planting (DAP) with 3 replications. Butterfly pea seeds are sown for 6 weeks. Butterfly pea seeds aged 6 weeks were transferred to land with planting holes with a depth of 7-10 cm with a spacing of 75 x 75 cm. Parameters observed were morphological growth (plant height, stem diameter, number of leaves, and number of branches), productivity (fresh weight, dry weight and crude protein), nutrient content, flavonoid content, tannins, lignin, dry matter digestibility (DMD) and organic matter digestibility (OMD). The research data were analyzed by analysis of variance (ANOVA), the test of differences between means was carried out using Duncan's Multiple Range Test (DMRT). The increase in urea level of butterfly pea in forage had a significant ($P < 0.05$) effect on growth, productivity, crude protein (CP), crude fiber (CF), crude fat, and lignin, but not significant ($P > 0.05$) on organic matter (OM), tannins, flavonoids, DMD and OMD. Defoliation had a significant effect ($P < 0.05$) on growth, productivity, CF, crude fat, and lignin, but had no significant effect ($P > 0.05$) on CP, OM, tannins, flavonoids, DMD and OMD. There was an interaction ($P < 0.05$) between fertilizer level and defoliation on growth and productivity, but there was no interaction ($P > 0.05$) on CP, CF, crude fat, OM, flavonoids, tannins, DMD and OMD. It was concluded that the butterfly pea for growth, productivity, CP, CF, crude fat, and lignin increased in line with the increase in fertilizer levels, but OM, tannins, flavonoids, DMD and OMD showed a decrease. Growth, productivity, DM, CF, crude fat, and lignin increased in line with the increasing age of harvest. However were showed a decrease in CP, OM, tannins, flavonoids, DMD and OMD. The highest flavonoid levels occurred in the treatment of 200 kg/ha with a defoliation of 30 DAP (1.48%) and the highest tannin content in the treatment of 100 kg/ha with a defoliation of 30 DAP (4.49%).

Key words: *Clitoria ternatea*, Harvest, Productivity, Urea fertilizer