

Preliminary Study on the Effect of Nitrogen Fertilisation on Phytochemical Content Quality of *Gynura procumbens*

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Abstract: The study was carried out to examine the effects of nitrogen (N) fertilisation on phytochemical content quality, to determine types of phytochemicals compositions, and to establish phytochemicals marker compounds in *Gynura procumbens*. In this two factors study, three stages of harvesting (H) time and three rates of N were laid out according to Randomised Complete Block Design (RCBD). Physiological and biochemical attributes were recorded to exhibit the trend for plant quality. The results showed that, N has affected phytochemical content significantly ($p < 0.05$) with stronger effect on physiological and biochemical attributes ($p < 0.01$). The results suggested that 0 and 90 kg/ha N, respectively are highly and least effecting the Photo, Cond, TChC, TCC, TPrC, TliC, TPC and TFC.

Keywords: *Gynura procumbens*, Herbs, Phytochemical, Nitrogen

Abstrak: Kajian ini dijalankan untuk mengkaji kesan baja nitrogen (N) terhadap kualiti kandungan fitokimia, menentukan jenis komposisi fitokimia dan menentukan sebatian penanda fitokimia dalam *Gynura procumbens*. Kajian ini melibatkan dua faktor; masa penuaian dan kadar N, dan mengikut RCBD. Kesan-kesan terhadap faktor fisiologi dan biokimia tumbuhan telah direkodkan dalam tiga peringkat penuaian untuk memperlihatkan corak dan kualiti pertumbuhan dan kandungan fitokimia. Nitrogen memberi kesan yang jelas terhadap kandungan fitokimia ($p < 0.05$), dengan kesan yang signifikan terhadap faktor fisiologi dan biokimia ($p < 0.01$) tumbuhan. Keputusan menunjukkan bahawa 0 dan 90 kg/ha N masing-masing memberi kesan yang sangat tinggi dan paling sedikit terhadap Photo, Cond, TChC, TCC, TPrC, TliC, TPC dan TFC.

Kata kunci: Fitokimia, *Gynura procumbens*, Herba, Nitrogen

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