Intisari

Penelitian bertujuan untuk 1) mengetahui pertumbuhan, produktivitas, dan kandungan flavonoid sambung nyawa (*Gynura procumbens* (Lour.) Merr.) yang dibudidayakan pada tiga tingkatan perkembangan agroforestri, yaitu awal, tengah, dan lanjut, dan 2) menentukan tingkatan perkembangan agroforestri yang optimal untuk kegiatan budidaya sambung nyawa dengan indikator berupa produktivitas dan kandungan flavonoid pada daun yang tertinggi. Penelitian dilaksanakan di kawasan agroforestri desa Nglanggeran, kecamatan Patuk, kabupaten Gunungkidul. Percoban lapangan disusun dalam rancangan *over site*, faktor tunggal dengan tiga blok sebagai ulangan. Faktor yang diuji adalah fase perkembangan agroforestry, terdiri dari tiga fase yaitu awal (tingkat penaungan <50 %), tengah (tingkat penaungan 50-70 %), dan lanjut (tingkat penaungan >70 %). Variabel yang diamati mencakup karakter iklim mikro, karakter kimia tanah, karakter fisiologis dan pertumbuhan, produktivitas, dan kandungan flavonoid tanaman. Data yang diperoleh selanjutnya dianalisis varian (ANOVA) pada tingkat kepercayaan 95%, dan dilanjutkan dengan *Duncan Multiple Range Test* (DMRT) jika terdapat beda nyata antar perlakuan. Hubungan antara suhu udara, kelembapan udara, dan intensitas cahaya matahari dengan semua variabel uji ditentukan dengan analisis regresi. Hasil penelitian memberikan informasi bahwa tanaman sambung nyawa memiliki daya adaptasi yang cukup luas jika diusahakan dengan konsep agroforestri karena memiliki laju pertumbuhan, produktivitas, serta kualitas hasil yang sama ketika dibudidayakan pada agroforestri fase awal, tengah, dan lanjut. Kualitas daun sambung nyawa yang dihasilkan pada agroforestri fase awal, tengah, dan lanjut cukup baik dan dapat memenuhi standar Farmakope Herbal Indonesia, khususnya dari aspek kandungan flavonoid. Secara berturut-turut kandungan flavonoid daun sambung nyawa yang dihasilkan pada fase awal, tengah, dan lanjut adalah 1,42; 1,72; dan 1,18 %b/b.

Kata kunci: agroforestri, sambung nyawa, flavonoid

Abstract

The objectives of research were 1) to determine the growth, productivity, and flavonoid contents of "Sambung Nyawa" (Gynura procumbens (Lour.) Merr.) that cultivated at three development stages of agroforestry, namely early, middle, and advanced stages, and 2) to determine the optimal development stage of agroforestry for the cultivation of "Sambung Nyawa" with the indicator of high productivity and flavonoid content in the leaves. The research was conducted in agroforestry area at Nglanggeran Village, Patuk District, Gunungkidul Regency. The field experiment was arranged in an over site design, single factor, with three blocks as replications. The factor was development stages of agroforestry, consisting of three developments stages, namely early stage (shading rate <50 %), middle stage (shading rate 50-70 %), and advanced stage (shading rate >70 %). The observations were done on several variables of microclimate, soil chemical characters, physiological and growth characters, productivity, and flavonoid contents. Data were analyzed with Analysis of Variance (ANOVA) at 95 % confidence levels, and continued with Duncan Multiple Range Test (DMRT) if there were differences among the treatments. The relationship patterns between air temperature, humidity, and light intensity with all the dependent variables were determined with regression analysis. The results showed that "Sambung Nyawa" have wide adaptability if cultivated under agroforestry because it has the same growth rate, productivity, and quality when cultivated in the early, middle, and advanced developments stages of agroforestry. The quality of "Sambung Nyawa" leaves that produced in the early, middle, and advanced development stages of agroforestry were quite good and can meet with the Indonesian pharmacopoeia standards, especially from the aspect of flavonoid contents. The flavonoid contents of "Sambung Nyawa" that produced by early, middle, and advanced development stages of agroforestry were 1.42, 1.72, and 1.18 % w/w, respectively.

Key words: agroforestry, sambung nyawa, flavonoids