

Evaluasi pengaruh jenis pupuk, dosis, serta mikoriza terhadap kandungan artemisinin dari artemisia annual = Evaluation of effect of fertilizer type dose and mycorrhizae on artemisinin content of artemisia annual

Andreas Susilo Adi, author

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Abstrak

Penelitian bertujuan mengevaluasi persentase berat kering artemisinin pada *Artemisia annua* yang diberi perlakuan pemberian pupuk NPK, pupuk kandang, mikoriza, dan lokasi tempat budidaya tanaman. Sampel berasal dari dua tempat, Cibodas dan Tawangmangu. Sampel masing masing diberi perlakuan melalui pemberian pupuk NPK dengan konsentrasi 0:0:0; 40:40:40; 80:80:80; 120:120:120, pupuk kandang, dan pemberian mikoriza. Sampel tersebut diekstrak dengan methanol dan hasilnya dianalisis menggunakan HPLC.

Hasil penelitian menunjukkan sampel dari Cibodas dengan kode CF4M+7 sebesar 0,788% berat kering tanaman, Tawangmangu dengan kode sampel TF3M+3 sebesar 0,674% berat kering tanaman. Hasil penelitian menunjukkan bahwa penambahan pupuk NPK, pupuk kandang, dan pemberian mikoriza menyebabkan penurunan kadar artemisinin pada setiap sampel. Berdasarkan jenis lokasi, Tawangmangu merupakan daerah yang cocok sebagai tempat budidaya *Artemisia annua*.

The study aimed to evaluate the percentage of dry weight of artemisinin in *Artemisia annua* treated with NPK fertilizer, manure, mycorrhiza, and the location where the cultivation of crops. The samples come from two places, Cibodas and Tawangmangu. Each sample was treated through the administration with a concentration of NPK 0:0:0; 40:40:40; 80:80:80; 120:120:120, manure, and the provision of mycorrhizae. The sample were extracted with methanol and the results were analyzed using HPLC.

The results showed a sample of the code CF4M+7 0,788% dry weight of plants, Tawangmangu with sample code TF3M+3 at 0,674% dry weight of plants. The results showed that the addition of NPK fertilizer, manure, and the provision of mycorrhizal led to decreased levels of artemisinin in each sample. Based on location, Tawangmangu is an area that is suitable for *Artemisia annua* cultivation.