Biomass, chlorophyll and nitrogen content of leaves of two chili pepper varieties (Capsicum annum) in different fertilization treatments

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Abstrak

Suharja, Sutarno. 2009. Biomass, chlorophyll and nitrogen content of leaves of two chili pepper varieties (Capsicum annum) in different fertilization treatments. Nusantara Bioscience 1: 9-16. This study aims to determine the influence of various fertilization treatments on biomass, chlorophyll and nitrogen content of leaves from two varieties of chili, Sakti (large chili) and Fantastic (curly chili). The study was conducted in the village of Gatak, Karangnongko sub-district, Klaten District, Central Java in September 2006 to March 2007. The study used a complete block design with two factorial of chili varieties and fertilizer treatment. Fertilization treatments includes no fertilizer (control) (P1); manure 2 kg/plant (P2), manure (1 kg/plant) + chemical fertilizer (ZA, SP-36, KCl = 2: 1: 1) + NPK (P3); and manure (1 kg/plant) + chemical fertilizer (SP-36: KCl = 1:1) + liquid organic fertilizer (P4). Chlorophyll content was measured refers to Harborne(1987), whereas leaf nitrogen concentration was measured with Kjeldahl method. Data were analyzed using ANOVA followed by DMRT. The results showed that on the Fantastic chili fertilizer treatment affected the biomass and chlorophyll a, but gave no effect on chlorophyll b, total chlorophyll and leaf nitrogen. On the curly chili fertilizer treatment effected plant fresh weight, chlorophyll a and total chlorophyll, but gave no effect on dry weight, fresh fruit weight, chlorophyll b and leaf nitrogen. It is, therefore, recommended to use the formulation of manure + chemical fertilizer (SP-36: KCl = 1: 1) + liquid organic fertilizer in the cultivation of chili