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EFFECTS OF BIOFERTILIZERS AND CHEMICAL ON QUANTITATIVE AND QUALITATIVE YIELD OF DRAGONHEAD (DRACOCEPHALUM MOLDAVICA L.)

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In order to have a sustainable agriculture it is necessary to use environmental friendly inputs to improve ecological aspects of environment. An experiment was conducted at Research Station, Faculty of Agriculture, Shahed University of Tehran, Iran, in year 2011-2012. A complete randomized block design with five treatments, and three replications was used. The treatments were: control (no fertilizer), biological nitrogen, biological phosphorus, biological nitrogen + biological phosphorus and chemical origin of nitrogen + phosphorus + potassium. In this experiment, 1000 seeds weight, plant height, seed yield, biological yield, harvest index (HI), essential oil and essential oil yield were studied. Mean comparison was carried out using Duncan multiple range test (P<0.05). According to the results, maximum of essential oil (0.53%) in the treatment of biological nitrogen + biological phosphorus and the minimum of essential oil (0.33%) in control (no fertilizer treatment) obtained. The maximum of essential oil yield (1.51 g¹ m²) in the treatment of biological nitrogen + biological phosphorus and the minimum of essential oil yield (0.41 g¹ m²) in control (no fertilizer treatment) obtained. The maximum of harvest index (58.58%) in the treatment of biological nitrogen + biological phosphorus and the minimum of harvest index (49.43%) in control (no fertilizer treatment) obtained. In all studied traits, application of some biofertilizers was significantly better than control treatment (no fertilizer).