



ACADEMY OF SCIENCES AND ARTS  
OF BOSNIA AND HERZEGOVINA  
Department of Natural and  
Mathematical Sciences



Medicinal and  
Aromatic Plants  
Sarajevo



## International Conference

Medicinal and Aromatic  
Plants in Generating of New Values  
in 21<sup>st</sup> Century

November 9-12<sup>th</sup>, 2011 Sarajevo, Bosnia and Herzegovina  
Congress Center, Hotel HOLLYWOOD, Ilidža - Sarajevo





**AKADEMIJA NAUKA I UMJETNOSTI BOSNE I HERCEGOVINE**  
**АКАДЕМИЈА НАУКА И УМЈЕТНОСТИ БОСНЕ И ХЕРЦЕГОВИНЕ**  
**ACADEMY OF SCIENCES AND ARTS OF BOSNIA AND HERZEGOVINA**

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**SPECIAL EDITIONS**  
**VOL. CXL**

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Department of Natural Sciences and Mathematics  
Volume 18

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**INTERNATIONAL CONFERENCE**

**"MEDICINAL AND AROMATIC PLANTS**  
**IN GENERATING OF NEW VALUES**  
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Sarajevo, 9-12 November, 2011

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**Book of Abstracts**

**SARAJEVO 2011**

P.H.05.

## EFFECT OF ORGANIC MANURE ON *ECHIUM AMOENUM* FLOWER PRODUCTION

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Dry violet blue flowers of *Echium amoenum* (Gol-e-Gavzaban) has long been used in traditional medicine of Iran. In order to meet the ever-increasing demand of *E. amoenum*, for the indigenous systems of medicine as well as for the pharmaceutical industry, *E. amoenum* need to be cultivated commercially, but the physical and chemical situation of the soil fertility to plant production of *E. amoenum* is not known clearly. This experiment was conducted based on Completely Randomized Block Design with three replications and four treatments at Research Station, Faculty of Agriculture, Ferdowsi University of Mashhad, Iran, in year 2009-2011. Treatments included: cow manure (30 t/ha), Urban compost (20 t/ha), vermicompost (5 t/ha) and control. The results showed that studied treatments had significant effect on the most of studied indices. The highest plant height was obtained in vermicopost treatment. The highest main and lateral branches numbers and number of flowers per plant were obtained in cow manure and vermicompost. In addition, the highest and lowest fresh flower yield and dry flower yield were observed at second and fourth harvest, respectively. Also, the highest and lowest number of flower per 5 g of flower obtained at fourth and first harvest, respectively. Hussien [3] reported that some of growth indices, dry and fresh yield of *Dracocephalum moldavica* increased by application of compost [3]. It has been stated that growth indices of plants increased through improving of physical and chemical characteristics of soil by application of organic manure [1, 2]. Tahami Zarandi et al. [4] found that the maximum dry and fresh yield of *Ocmimum basilicum* were obtained at third harvest [4]. Overall, our results showed that studied organic manures have positive effect on *E. amoenum* petals production.

**Keywords:** compost, cow manure, vermicompost, medicinal plants, yield

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