



Effect of Different Hosts on Growth and some Phytochemical Compounds of Medicinal Dodder (*Cuscuta epithymum*)

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The dodder plant for the nutrition and development are absolutely dependent on the host plant and therefore have structural, physiological and biochemical relationships with it [1]. In order to investigate the host effect on growth, yield and production of some phytochemicals in eftimon dodder (*Cuscuta epithymum*) this study was carried out in a randomized complete block design with 3 replications. The treatments consisted of five host species (camelthorn (*Alhagi camelorum*), Syrian mesquite (*Prosopis farcta*), red-root amaranth (*Amaranthus retroflexus*), prickly lettuce (*Lactuca scariola*) and horseweed (*Conyza canadensis*)). The evaluated parameters included fresh and dry weight of dodder, seed yield, weight of one thousand seeds, phenolic compounds, flavonoids, quercetin, kaempferol, dulcitol, cuscutin and β -sitosterol. The results showed that host effect was significant on dry weight, seed yield and phenolic compounds, kaempferol, dulcitol, cuscutin and β -sitosterol. The highest dry weight and seed production were related to dodder grown on amaranth and camelthorn respectively. The highest amount of phenolics, kaempferol, cuscutin and β -sitosterol compounds was obtained in dodder grown on amaranth. The highest and lowest amounts of antioxidant capacity were measured with the amounts of 81.34 and 56.61% in the dodders grown on the amaranth and camelthorn hosts, respectively. In this research, it was observed that the dodder growth and production of active ingredients are influenced by host plants. In general, it is necessary to pay attention to the host for the effective usage of the medicinal dodder.

Keywords: Eftimon dodder, Host, Growth, Antioxidant capacity, Phytochemical compounds

Reference

[1] Benvenuti, S. *Weed Res.* **2005**, *45*, 270–278.