

PP63. Composition and phytotoxic activity of the essential oils of two invasive plant species

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Alien species have been entering Europe for centuries. Their numbers have risen exponentially. Invasive species have multiple negative ecological, economic and human-health impacts. Chemicals produced by alien species are allelopathic to native species which are less resistant to them. This effect probably enables alien species to spread to new areas [1]. The possible use of natural compounds in weed management has been well documented [2,3].

Our research focused on two invasive species—*Heracleum mantegazzianum* Sommier et Levier (Apiaceae, giant hogweed) and *Impatiens parviflora* DC. (Balsaminaceae, small balsam). Giant hogweed produces a large number/amount of chemical compounds, such as coumarins and esters [4]. Many groups of active compounds have been isolated from different species of the genus *Impatiens* [5]. However, only few reports are available concerning the volatile constituents of both species.

The aim of the present experiment was to determine the quantitative and qualitative properties of the essential oils (EOs) hydrodistilled from the two invasive species. The phytotoxic effect was tested on selected dicotyledonous plant species. Different biological effects were evaluated in different concentrations of EOs.

References:

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