Common invasive weed brings hay-fever allergies to Europe

A surprising number of people in Europe are suffering from allergies caused by the common ragweed, *Ambrosia artemisiifolia*, according to a recent study. The researchers recommend a co-ordinated European monitoring programme to track the spread of this invasive alien plant.

The common ragweed is a native plant of North America, where it is a leading cause of hay-fever type allergies. Symptoms include itchy and swollen eyes, sneezing, an irritable throat and wheezing. In Europe, exposure to the pollen lasts from the release of the pollen in late summer through to early winter. The plant is spread easily by the wind.

It is thought that the common ragweed, which grows in disturbed ground, invaded formerly cultivated fields in Hungary and became established in the early 1990s, when collective farming, established under communist rule, was abandoned. Since then, allergy sufferers have been identified in Turin in Italy, Geleen in The Netherlands and Norwich in the UK. However, the problem was not thought to be significant across Europe. The EU funded GA²LEN study suggests that the number of people sensitive to this plant is raising sharply, in line with the continuing spread of the plant across Europe.

Patients with allergy symptoms were tested in 16 out-patient centres across 13 European countries. Skin prick tests were used on patients for 18 indoor and outdoor allergy-causing substances, including the common ragweed. The results were used to assess the degree of ragweed sensitisation among these patients.

This study suggests that over 2.5 per cent of the population (the accepted threshold for high prevalence) in all European countries were sensitive to the ragweed pollen. For Finland the figure was 2.4 per cent. As expected, Hungary had the highest level of sensitisation (58-60 per cent). But other countries in Central and Western Europe also had very high levels: the Netherlands’ population had an occurrence of 15.2 per cent and Germany’s was 14.2 per cent. Citizens in Denmark were also significantly affected, with 19.8 per cent of the population sensitive to the pollen. In addition, 23.7 percent of ragweed-sensitive patients across Europe also had symptoms of asthma.

The researchers suggest that as the pollen can travel long distances on the wind, countrywide eradication programmes would be insufficient to curb the spread of the plant. Only Europe-wide countermeasures would be effective, such as setting up pan-European epidemiological databases. In addition, changes in vegetation across the continent under a changing climate could help the invader spread even further across Europe.

1. GA²LEN (Global allergy and asthma European network), is supported by the European Commission under the Food Quality and Safety Thematic area of the Sixth Framework Programme [http://www.ga2len.net/index.cfm?CFID=316299&CFTOKEN=52011085](http://www.ga2len.net/index.cfm?CFID=316299&CFTOKEN=52011085). The ragweed data make up part of the results of the GA²LEN study. A more comprehensive report of results will be published shortly in the journal *Allergy*, revealing sensitisation trends to several highly allergenic pollens of trees and plants across Europe.


Contact: torsten.zuberbier@charite.de

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