

Introduction and Background

Pyrethroid resistance has been recorded in European populations of the pollen beetle (*Meligethes aeneus*) since 1999, when it was first reported in Eastern France.

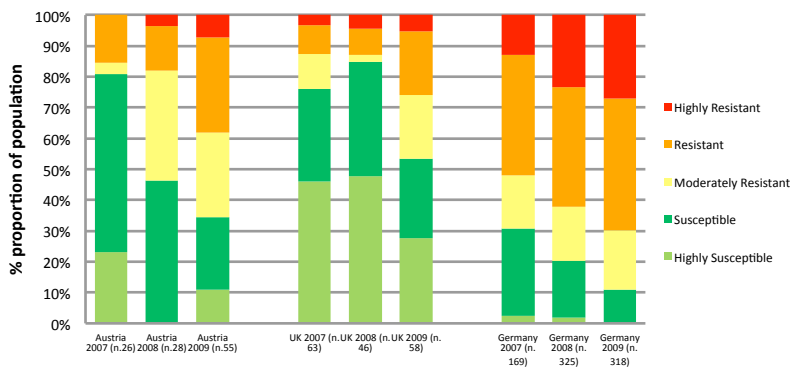
An IRAC Pollen Beetle Working Group was established to bring together expertise from agrochemical companies and independent researchers in order to monitor the development of insecticide resistance in oilseed rape pests and to provide guidance and advice on the best practices to prevent further insecticide resistance development.

In order to monitor the spread of pyrethroid resistance, an insecticide coated glass vial assay was developed by members of the working group. This method has been used to determine the pyrethroid susceptibility of European populations of pollen beetle and the results of the 2009 monitoring program are presented in this poster. More details of the method utilised in this survey can be found on the IRAC website (www.irc-online.org).

Summary & Recommendations

- Pyrethroid resistant populations of pollen beetle dominate in France, Belgium, Netherlands, Germany, Sweden, Switzerland, Czech Republic and Poland.
- Resistant populations can also be found in the UK, Luxemburg, Austria, Lithuania and Russia.
- Only Romanian and Latvian populations remain fully susceptible to pyrethroids in this survey, although susceptible populations dominate in the UK, Finland, Hungary, Luxembourg and Estonia.
- Susceptibility surveys conducted between 2007 and 2009 suggest that in general pyrethroid resistant populations are continuing to increase in Central Europe and spread into Eastern Europe.
- In order to prevent further insecticide resistance development, it is recommended that insecticides with different modes of action are utilised in a effective resistance management program, dependant on local insecticide availability and national use guidelines. IRAC guidelines for resistance management in oilseed rape can be found on the IRAC web-site.

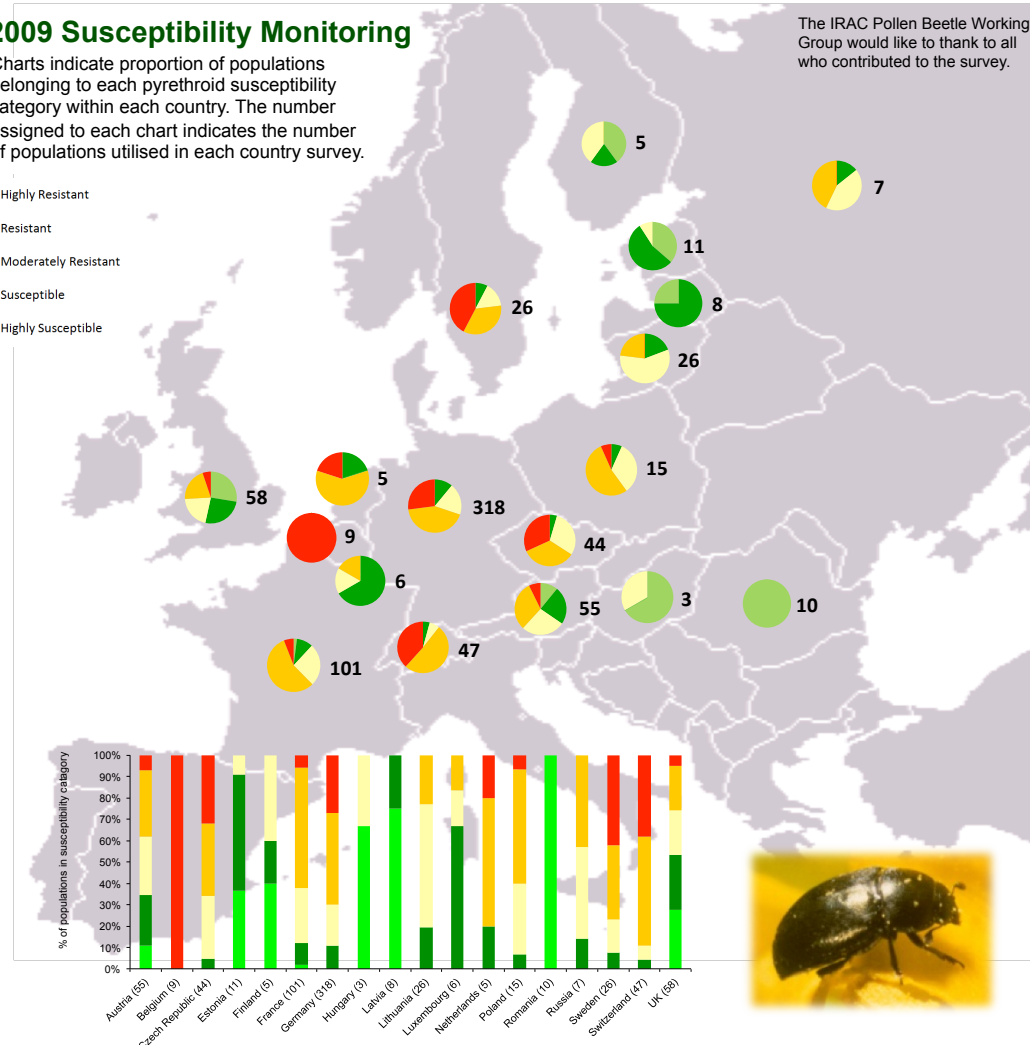
Changes in the pyrethroid susceptibility of pollen beetle populations 2007 - 2009



2009 Susceptibility Monitoring

Charts indicate proportion of populations belonging to each pyrethroid susceptibility category within each country. The number assigned to each chart indicates the number of populations utilised in each country survey.

- Highly Resistant
- Resistant
- Moderately Resistant
- Susceptible
- Highly Susceptible



The IRAC Pollen Beetle Working Group would like to thank to all who contributed to the survey.

