Introduction and Background
Pyrethroid resistance has been recorded in European populations of the pollen beetle (Brassicogethes aeneus) since 1995, when it was first reported in Eastern France. The IRAC Coleoptera Working Group brings together expertise from agrochemical companies and independent researchers in order to monitor the development and spread of resistance in pollen beetle and other coleopteran pests of oilseed rape. Pyrethroid, neonicotinoid, organophosphate and indoxacarb susceptibility is measured by the use of insecticide coated glass vial assays. Results of the 2018 susceptibility monitoring program are presented in this poster. More details of the methods used in this survey can be found on the IRAC website (www.irac-online.org).

Summary & Recommendations

- In the majority of countries surveyed, pyrethroid resistant populations of pollen beetle dominate (> 60% are resistant).
- In 2018 less than 10% of pollen beetle populations (n=200) surveyed in Europe could be classified as pyrethroid susceptible.
- After an initial decline in the number of susceptible pollen beetle populations observed in Europe since the IRAC survey began in 2007, only small variations in the percentage of pyrethroid susceptible and resistant beetle populations have been observed since 2010.
- The majority of populations tested across Europe remained fairly susceptible to neonicotinoid insecticides. However, there is a clear trend of increasing populations with a lower sensitivity (<75% mortality).
- The observed decreased susceptibility against neonicotinoid insecticides steadily increased over the last four years and is reported to be statistically significant. Resistance management practice should be implemented to avoid further susceptibility decline in pollen beetle. Neonicotinoids remain important for the control of other OSR pests.
- There was no evidence of changes in organophosphate and indoxacarb susceptibility observed in the European countries surveyed.
- In order to prevent further insecticide resistance development, it is recommended that insecticides with different modes of action are utilised in an effective resistance management program, dependent on local insecticide availability and national use guidelines. IRAC guidelines for resistance management in OSR can be found on the IRAC website.
- IRAC would like to thank all of those who contributed to the survey.

This poster is for educational purposes only. Details are accurate to the best of our knowledge but IRAC and its member companies cannot accept responsibility for how this information is used or interpreted. Advice should always be sought from local experts or advisors and health and safety recommendations followed.