



Aggregate and Cumulative Risk Of Pesticides:
an On-line Integrated Strategy

A new IT tool for pesticide risk assessment



The impact of pesticides, and especially mixtures of pesticides, on food safety is of serious concern to European policymakers and the general public. With this in mind, the ACROPOLIS project has developed a tool that food authorities, regulators and the industry can use to address multiple adverse effects (so-called ‘cocktail effects’) of exposure to groups of pesticides in pesticide risk management. Use of this tool can help consumers to gain confidence in the regulatory process and future legislation concerning pesticide safety evaluations.

European legislation

European policy on pesticide residues states that industry, food authorities and regulators must perform pesticide risk assessments that include cocktail effects of pesticides. These effects should be addressed as soon as the European Food Safety Authority (EFSA) has agreed on the methodology on how to do this. Due to the lack of such a methodology, exposure to multiple pesticide residues has not yet been considered. Using the tool developed as part of the ACROPOLIS project, assessments addressing exposure to groups of pesticide residues via food can be performed at the international level. Furthermore, the tool complies with the 2012 EFSA guidance on the use of probabilistic modelling for estimating dietary exposure to pesticide residues. EFSA is responsible for European risk assessment procedures and methodology.

ACROPOLIS IT tool

A major deliverable of the ACROPOLIS project is a web-based freely accessible IT tool that includes models for calculating the exposure to pesticides. The result of a calculation is an exposure distribution, describing the range of exposure levels within a population. These results can form the basis for an open and transparent discussion among all stakeholders regarding the authorization of pesticides on the European market. The IT tool is also compatible with the European data collection infrastructure.

The tool has been validated and will be available without any commercial interest after the European Commission has accepted the deliverables of the ACROPOLIS project.

ACROPOLIS IT tool and stakeholders

To ensure the practical usability of the IT tool by all stakeholders involved in pesticide risk assessment, the project organization devoted much attention to including stakeholders in the tool’s development. The stakeholders included were consumer groups, non-governmental organizations, retailers, regulators, quality managers of multiple food suppliers, producers, food authorities and the pesticide industry. Involvement was guaranteed in two ways. First, stakeholders were trained in using an early version of the tool. Secondly, they were invited to attend two ACROPOLIS stakeholders conferences, one halfway through the project and one at the final stage of the project. During the training sessions and the stakeholder meetings, the stakeholders present were given an opportunity to offer input on the model’s development. In the final stage of the project, they could evaluate the tool. In general, the tool was well-received by nearly all stakeholders. Furthermore, the project was supported by a Scientific Advisory Board and an External Advisory Board. The involvement of these boards ensured optimal alignment with risk assessment methodology needs regarding cumulative risk assessment within EFSA and DG SANCO.



ACROPOLIS IT tool and data platform

During the course of the ACROPOLIS project, different countries joined the project. This resulted in the creation of a platform of national food consumption data and concentration data that can be extended and made usable for pesticide risk assessment in connection with the IT tool. The cooperation achieved in this project between the stakeholders and countries involved will facilitate future implementation of the models in European risk management practice.

Follow-up initiative

The ACROPOLIS partners, who are owners of the national consumption and concentration data and/or models set up and developed within the project, have agreed on a follow-up initiative which is actively supported by the European Commission and a number of national food authorities or Ministries. The Commission has asked Member States who are not yet included in the project to join the follow-up initiative and contribute their own national food consumption and concentration data. Cooperation between EFSA, DG SANCO, Member States and the ACROPOLIS follow-up initiative will be sought, with the aim of further improving European pesticide risk management.



Aggregate and Cumulative Risk Of Pesticides:
an On-line Integrated Strategy

About ACROPOLIS

In the past 3.5 years, the ACROPOLIS project has linked innovation in the area of complex model development to practical needs of stakeholders including the European Commission. The project deliverables included an IT tool with models and data that can be used to calculate exposure to pesticides.

Funding

This project received 3 million euro in funding under the European Commission's Seventh Framework Programme (FP7). The European Commission has strict rules on including industry players and other stakeholders in European projects. Associated partners contributed at their own expense.

*Acknowledgement: EU grant agreement
EU-FP7 KBBE-2009 No. 245163.*



Partners

National Institute for Public Health and the Environment	The Netherlands
The Food and Environment Research Agency	United Kingdom
University of Milano	Italy
National Research Institute for Food and Nutrition (INRAN)	Italy
Institute for Risk Assessment Sciences - Utrecht University	The Netherlands
Health and Safety Executive - Chemicals Regulation Directorate	United Kingdom
National Institute of Public Health	Czech Republic
Freshfel Europe	Belgium
National Food Agency	Sweden
Ghent University	Belgium
Wageningen University and Research Centre	The Netherlands
Austrian Agency for Health and Food Safety (AGES)	Austria
State General Laboratory, Ministry of Health	Cyprus
French Agency for Food, Environmental and Occupational Health & Safety (ANSES)	France
National Institute of Public Health	Slovenia
Technical University of Denmark	Denmark
Benaki Phytopathological Institute	Greece
Food and Veterinary Service	Latvia

Information

For further information, visit
www.acropolis-eu.com

Project Coordinator:
Jacob van Klaveren, MSc
National Institute for Public Health and the Environment (RIVM)
E-mail: jacob.van.klaveren@rivm.nl