Recent developments in avian toxicity testing and risk assessment refinement

Dr Peter Aikens[a], Dr Katie Barrett, Mr David Cameron and Dr Simon Moore

Huntingdon Life Sciences, Huntingdon, UK

Developments in worldwide regulatory requirements for crop protection products require new approaches to provide data for conducting effective risk assessments for both humans and the environment. These range from new study designs to investigate specific risks to enhancement of existing designs to maximise the usefulness of available data. This presentation will cover two main topics:

1) The requirement for avian inhalation studies
2) The possibilities for refining avian risk assessment through bespoke feeding studies

The US Environmental Protection Agency (EPA) is now making requests for the conduct of avian inhalation studies for some crop protection products. In the presentation the regulatory drivers for these requests will be discussed. Undertaking such studies presents certain challenges both in terms of the choice of species, handling and exposure. In the absence of a guideline protocols need to be discussed individually with the EPA to ensure acceptability. Our experience of these discussions and the approach taken to achieve the regulators expectations will be presented. Data interpretation and use in a risk assessment situation will also be considered.

In the second part of the talk we will explore the methods by which the risk to avian species can be further evaluated under laboratory conditions to address the potential hazard posed from ingestion of contaminated food. Since the adoption of the European Food Safety Authority (EFSA) bird and mammal risk assessment scheme, it has proved difficult for some crop protection products, particularly insecticides, to achieve a satisfactory risk assessment. In the presentation novel methodology developed at Huntingdon will be described. This provides a 'higher tier' experimental evaluation of food ingestion, which can be used in the risk assessment to achieve a more favourable outcome.

[a] Presenting author (e-mail: aikensp@ukorg.huntingdon.com)