

4.7 Workshop summary: Bumble bee ecotoxicology and risk assessment

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Abstract

Declines of bumble bees and other pollinator populations in Europe and North America are of concern because of their critical role for crop production and biodiversity maintenance. Although the consensus in the scientific community is that the interaction of many factors including habitat loss, forage scarcity, diseases, parasites and pesticides probably play a role in causing these declines, pesticides have received considerable public attention and scrutiny. In response regulatory agencies have introduced more stringent pollinator testing requirements for registration and re-registration of plant protection products, to ensure the risks to pollinators are minimised. Guidelines for testing bumble bees in regulatory studies are not yet available and there is a pressing need to develop suitable protocols for routine studies with these non-*Apis*, social bees. As a first step, Bayer CropScience, Syngenta Crop Protection and Valent U.S.A. Corporation organized a workshop bringing together a global team of bumble bee ecotoxicology experts to discuss and develop draft protocols for both semi-field (Tier II) and field (Tier III) studies. The workshop was held at the Bayer Bee Care Center, in Research Triangle Park, North Carolina during May 8-9, 2014. The participants represented academia, consulting and industry from Europe, Canada, United States and Brazil. The workshop identified a clear protection goal, and generated proposals for basic experimental layouts, relevant measurements and endpoints for both semi-field (tunnel) and field tests. The workshop participants intend to disseminate this information as widely as possible to interested researchers and regulatory officers, who can advance the development of protocol guidelines based on these initial recommendations.