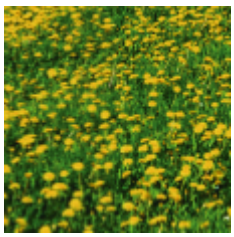

Defining ‘negligible exposure’ within the context of Regulation 1107/2009

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'Negligible exposure' in the context of Regulation 1107/2009

Scope of this document

This position paper is the European Crop Protection Association (ECPA) proposal for the interpretation and implementation of the 'negligible exposure' provision in Annex II point 3 of Regulation 1107/2009, in the human health area.

Background and Introduction

Regulation (EC) 1107/2009 concerning the placing of plant protection products on the market entered into force in December 2009. It will repeal Directive 91/414/EEC on 14 June 2011 and will apply from that date.

Annex II of the Regulation sets out the criteria for the approval of active substances, safeners and synergists pursuant to chapter II. It states that an active substance safener or synergist shall only be approved if not classified in accordance with the provisions of Regulation (EC) No 1272/2008 as carcinogen category 1A or 1B, in accordance with the provisions of the regulation (EC) No 1272/2008 as toxic for reproduction category 1A and 1B and is not considered to have endocrine disrupting properties that may cause adverse effects in humans, *"…unless the exposure to humans to the active substance, safener or synergist in a plant protection product, under realistic proposed condition of use, is **negligible**, that is, the product is used in closed systems or in other conditions excluding contact with humans and where residues of the active substance, safener or synergist concerned on food and feed do not exceed the default value set in accordance with Article 18(1) (b) Regulation No 396/2005"*.

It defines negligible exposure as residue concentrations in food or feed below the default concentration of 0.01 mg/kg established in Article 18.1 of Regulation 396/2005. However negligible exposure is not fully defined in the non-dietary area: what constitutes no exposure of humans, knowing that humans are necessary involved in the agricultural use of plant protection products?

ECPA Proposal for 'Negligible exposure' of humans

The proposal is a three-step approach as follows.

Step 1: Measures to minimise exposure

- **Agricultural Scenarios**
  A combination of all of the following systems/measures would guarantee 'negligible exposure' of farmers and farm workers protecting crops/plants with plant protection products:
  1. Products shall only be authorised for professional, agricultural uses (no amateur uses!)
  2. Use of procedures for mixing loading of plant protection products which ensure least possible human contact to the plant protection product, e.g. via closed transfer systems.

3. Use of machinery which significantly reduces exposure during application (e.g. closed cabs, drift reducing nozzles) to ensure least possible human contact to the plant protection product for the operator, bystander and resident.
4. Use of chemical resistant gloves during cleaning and repair to ensure least possible human contact.
5. Use of all practically applicable risk mitigation measures possible (e.g. appropriate re-entry intervals) to attain least possible human contact to re-entry workers.

- **Seed Treatment Plants**
  In the specific area of industrial seed treatment, the following combination of measures would ensure negligible exposure of workers in seed treatment plants:
  1. Closed coupling system for delivery of product to mixing chamber including automated calibration features.
  2. Automated bagging
  3. Stringent PPE during clean up and repair operations to ensure least possible human contact.
  4. In addition, the product will only be distributed and used in seed treatment plants that have a fully automated system of treating, bagging and transporting the bags to vehicles used to transport the treated seed to the farm.
  5. Sowers of treated seed will be requested to apply PPE.

Step 2 Check Safety

Ensuring negligible exposure of humans would also involve a measurement of exposure under recommended conditions of us. Assessment of negligible exposure is ***therefore*** proposed to be done in a tiered approach.

In the first tier the registrant will show that the exposure is below the toxicological threshold of concern (TTC). The concept of applying a TTC value in risk assessments has been recently reviewed by HSE-CRD on behalf of EFSA [R. Brown et al., Project ID: CFP/EFSA/PPR/2008/01, Accepted for Publication on 27 November 2009]. The report concludes that for compounds not being genotoxic or neurotoxic a TTC of 1.5 µg/ kg bw/d represents an adequately protective value. ECPA proposes to apply this value for defining negligible exposure of not genotoxic and not neurotoxic compounds.
Endpoint specific TTC values (i.e. for reproductive and developmental toxicity, carcinogenicity and systemic toxicity) are currently under development and should be considered more relevant when assessing compounds with known toxicological endpoints. Whenever these concepts have been elaborated and find wider acceptance the TTC values derived for individual endpoints should be used to demonstrate negligible exposure. This should be done such that the TTC value for the relevant endpoint leading to a compound falling under cut off criteria would be used according to the concept outlined above.

If the TTC approach does not clearly show negligible exposure, then - in the second tier - the registrant will demonstrate a Margin of Safety of at least 1000. The Margin of Safety approach will be calculated using the toxicological end point and the NOEL or NOAEL from the study that leads to the classification of the product (e.g. carcinogen category 1B, reproduction category 1B or endocrine

disruption). A margin of safety of at least 1000 is 10 times more stringent than the traditionally used for assessing acceptable safety. This additional safety factor covers any uncertainty in the derivation of toxicological endpoints and is intended to ensure that only compounds with a negligible exposure will pass the assessment.

Demonstrating to be below the TTC or to have a Margin of Safety of at least 1000 will be done by exposure assessments specifically considering the mitigation measures mentioned above and – where no appropriate experimental data are available – substantiated by exposure studies with operators or workers using passive dosimetry and/or biological monitoring techniques.

Step 3 Observational studies (to ensure continued safe use of the product)

The registrant will conduct observational studies, the frequency of which will be determined by Member States, EFSA and Commission (e.g. every five years). The objective will be to determine that safety measures adopted as conditions for the approval of the active substance are strictly followed.

It is anticipated that the implementation of Directive 2009/128/EC relative to the sustainable use of pesticides will contribute to a strict respect of protection measures through national action plans (article 4) and in particular the training of operators (article 5) and inspection of the application equipment (article 8).

The proposal made above is in the spirit of not only attempting to meet the definition of negligible exposure but also in line with the objectives of the Sustainable Use Directive.