12 March 2013

Why are neonicotinoids a threat to ecological health and safety of the European Union?

Neonicotinoid pesticides pose problems to the ecological health and safety of the EU. For this reason, under existing legislation, the Commission intends to apply the precautionary principle though legislative action. The arguments on the table are strong enough for: the Commission and Member States - to take now the vital political decision to ensure the wellbeing and future of pollinators throughout the EU.

Context

- Imidacloprid, clothianidin and thiamethoxam were placed on the market between mid-1990's, early 2000's.

- In early 2013, EFSA published a report, confirming what beekeepers have claimed since the 1990's: **neonicotinoids are risky for bees and pollinators**.

Arguments for decisive political action

- *The EFSA report[1] confirms that:* clothianidin, thiamethoxam and imidacloprid pose a risk to bees; **the pesticide industry is currently unable to satisfy the concerns of EFSA on this matter; it has failed to prove that these insecticides are safe for bees.**

  Indeed: using only the industry's data, in regard to clothianidin, thiamethoxam and imidacloprid: EFSA has identified risks to bees from exposure to contaminated nectar, pollen and dust from sowing neonic-treated-seeds. EFSA has also emphasised information gaps: (1) acute poisoning from exposure to contaminated plant exudates (guttation drops) or from honeydew, (2) persistence of toxic residues in soil, water and follow-on crops, (3) chronic, long term, lethal toxicity to bees at extremely low doses (4) neurotoxic and behavioural effects observed at minute, sub-lethal doses.

- **In a situation of such uncertainty, the European law must to be applied:** Recital (8) of Regulation (EC) 1107/2009 lauds:"*[...] The precautionary principle should be applied and this Regulation should ensure that industry demonstrates that substances or products produced or placed on the market do not have any harmful effect on human or animal health or any unacceptable effects on the environment.*"

- **Inaction would result in:** high cost to Europe's environment and food supply[2]. Neonicotinoids threaten the irreplaceable pollinator services, is currently valued at 28,5 billion US $ per year in the EU[3].

- **Concerns raised by scientific publications** since year 2000 support EFSA's report.

  - **Neonicotinoids persist in the environment for a very long time**; the half life of clothianidin in soil has been measured at 148 to 6900 days (sandy-loam and clay soils)[4]. Imidacloprid can be absorbed into untreated follow-on crops, up to two years after first use, and can then emerge in pollen and nectar of untreated flowers at levels toxic for bees [5].
    Neonicotinoids persistence has contaminated the wider environment, especially via toxic pollen. In 2002 and 2003, 69.1% of pollen collected by bees at 25 apiaries in five French departments, from treated and untreated plants was found contaminated with imidacloprid[6], even though this neurotoxin was ban from use on sunflowers in January 1999.

- **Neonicotinoids are extremely toxic to beneficial predator insects**, which are vital to a balanced ecosystem and for controlling pest populations[7].

- **Synergistic and cumulative effects:** when combined and synergised with other pesticides, especially fungicides, the toxic effects of neonicotinoids on bees increase dramatically, and are manifested in bees in a wide range of pathologies: bacterial, viral and fungal diseases[8].

- **Agronomic inefficiency of neonicotinoids**: similar crop-yields can be achieved with or without treatments of pesticides such as Gaucho ®[9]

- **Chronic and sub-lethal effects on bees:** Imidacloprid has been shown to produce behavioural effects[10], as well as physiological and metabolic effects in bees [11]. Indeed, very low doses of neonicotinoids can affect bee populations indirectly: through disorientation; inability to navigate back to the hive, reduced foraging efficiency, impaired memory and learning, failure to communicate within the colony, collapse of brood-rearing, decrease of metabolic efficiency and weakening of the bees immune system[12].

Our recommendations for the vote on neonicotinoids

Our ideal decision

- Total suspension of neonicotinoids, including acetamiprid and thiacloprid - i.e. total application of the Precautionary Principle - should be enacted until a comprehensive risk assessment is completed.
  Ban of all applications of neonicotinoids, bearing in mind varied uses e.g. agriculture, horticulture, livestock-treatments, forest management, golf-courses, municipal grasslands, parks, domestic-garden, garden centres.

Additional points to the Commission's proposal

- Given the hyper-persistence of these pesticides in soil and water, they should be suspended for 5 years.
- Ban of thiacloprid and acetamiprid, given their similar mode of actions compared to other neonicotinoids, and their potential synergetic effects with pathogens and fungicides[13]. Avoiding in this way the use of thiacloprid and acetamiprid as alternatives.

Our support

- Even if the Commission proposal, cannot fully address all of the safety problems posed by neonicotinoids, the text proposed by the Commission must be supported. If it is carried, this decision would take a step towards better protection of bees, pollinators and our environment in the future.

It is important to restore good relations that have normally existed between beekeeping and agriculture, and maintain pollinator vital services for society, as food production.

Policy-makers must seize this opportunity to act and move towards agricultural models which are more supportive, and less damaging to the environment, for: pollinators, farmers and beekeepers.

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