

Brussels, 12-08-13

Guidance document on bees

To: Mr. Tonio Borg
European Commissioner for Health and Consumer Policy
European Commission
B-1049 Brussels.

Concerning : EFSA Guidance Document on risk assessment of plant protection products on bees.

Dear Commissioner Borg,

The European Food Safety Authority (EFSA) has recently published its Guidance Document on risk assessment of plant protection products (PPP) on bees¹. Civil organisations warmly welcome the important work carried out by EFSA and the revolution in pesticides risk assessment to bees. Taking into account sub-lethal and chronic effects is an important step forward to better protect our honey bees.

Although this letter focusses on the protection goals for honey bees we also welcome the start of the process to develop risk assessment for wild solitary and bumble bees although there is more work to be done to fully develop the protocols as is acknowledged in the Guidance Document. Wild bees are essential to crop pollination as well as for pollination of the majority of wild flowers so it is essential that impacts on them are properly assessed including all possible routes of exposure (including soil for ground nesting species) and also that the potential for some bee species to be more sensitive to the impacts of PPPs than others is considered. We look forward to seeing the further development of protocols for solitary and bumble bees.

We nevertheless fear that this Guidance Document (GD), if accepted in its current form by the Commission, will miss its major task: protect pollinators and respect regulation 1107/2009, as explained hereunder.

Regulation 1107/2009 aims at ensuring a “high level of protection of human and animal health and the environment” (recital 8). Article 4 states that plant protection products (PPP) shall not have “any harmful effect on animal health”. We believe therefore that if regulation 1107/2009 is properly implemented, then it should protect bees.

Nevertheless, EFSA’s GD is in contradiction with the above mentioned principles of the regulation. According to the EFSA document, a 7% reduction in the size of the colony after exposure to a PPP would be acceptable. We consider this as totally unacceptable, as not scientifically sound and not taking into consideration the consequences on beekeepers’ activities. Honey bee colonies must be seen as biological

¹ www.efsa.europa.eu/en/efsajournal/doc/3295.pdf

entities, like any other production animal. Would any farmer accept that a cow loses 7% of its body weight after being exposed to a chemical?

Honeybee colonies are mainly composed of a queen and worker bees. Worker bees are divided between in-hive bees and forager bees. Chronologically, after birth, bees are first in-hive bees and then become forager bees. In-hive bees usually do not die as they are protected from outdoor dangers. Forager bees have a shorter life-span as they have to face many causes of death: rain, birds, wind, exhaustion, etc. Therefore, the physiology of the honey bee colony tolerates a certain rate of death of foragers which will be replaced by the oldest in-hive bees. On the other hand, no biological mechanism exists to rapidly counter in-hive bee deaths and restore the in-hive population homeostasis. For this reason, we completely oppose any percentage of reduction of the size of the colony.

We would also like to bring to your attention our concern that EFSA contradicts itself between the Scientific opinion on the science behind the risk assessment of plant protection products to bees (2012) and the 2013 GD on the risk assessment of plant protection products to bees. In the first document (p.14), EFSA describes a “small effect” as a 7% forager mortality (foragers = 15% of all bees of the colony) whereas the GD mentions a small effect as 7% reduction in all honeybees of the colony. This difference is enormous. The modification of the science-based feature from the scientific opinion has never been justified.

On the other hand, as mentioned before, foragers can undergo a small amount of increase in mortality (factor 2) and we accept the thresholds of foragers mortality increase proposed by EFSA.

We should also like to bring to your attention the fact that the thresholds proposed by EFSA concern a single PPP whereas bees are confronted in the reality to many PPP, simultaneously or consecutively. Several studies have shown that there are tens of PPP residues present in the hives². This should be included in the thresholds proposed by EFSA and this is not currently the case. If an apiary is exposed to 3 different PPP that would induce a 7% reduction in colony size each, honey bee number could shrink by one fifth or even more if interactions between the PPPs cause greater harm as some studies have suggested to be the case; this would be highly detrimental for honey production and would weaken the colony, especially in early spring or fall. We therefore request to apply security factors, due to the possible multiple exposures.

The percentile exposure assessment goal has been proposed in the GD to be set at 90%. This means that “90% of all colonies at the edge of a treated field in one regulatory zone should be exposed to less than that assessed in the risk assessment. For 10% of the colonies at the edge of a field in the regulatory zone the exposure could exceed what was assessed in the risk assessment. For these colonies the protection may not be achieved for substances which are highly toxic to bees (e.g. effects could exceed negligible effects)”, according to EFSA. This is thus in contradiction with article 4 of regulation 1107/2009 as 10% of the hives would be susceptible to suffer a non-negligible effect from PPP’s exposure. We realize that in the frame of the current agricultural practices,

² Honey bees and bee products as monitors of the environmental contamination. Porrini *et al.* *Apiacta* (2003)

A Survey of Pesticide Residues in Pollen Loads Collected by Honey Bees in France. Chauzat *et al.* *Journal of economical entomology* (2006).

reaching a percentile of 100% is difficult and therefore would like to propose to set the limit at 97.5%.

Furthermore, in its first draft GD, EFSA proposed to include honey production as an endpoint in the toxicity assessment. In the final GD, this endpoint has been withdrawn because the Standing Committee on Food Chain and Animal Health (SCoFCAH) asked for this. EFSA nevertheless states in the GD that honey production is a good endpoint. We are strongly opposed to the withdrawal of this endpoint. As mentioned before, honey bee colonies are biological entities that rely on a highly developed social structure. Inter-individual communication is therefore very important and can be disrupted by the presence of toxic chemicals in the hive. Scientific literature provides many examples of chemicals' sub-lethal effects at very small doses³. Such disruptions impede normal physiology of the hive and a very good tool to measure this effect is measuring honey production.

In addition to this, EFSA's GD mentions ecosystem services as a protection goal (i.e. pollination) and we fully support this but beekeepers' economic status is also important and even though it is mentioned in EFSA's GD, it is not taken into account by the SCoFCAH. We kindly ask you to include honey production as a mandatory endpoint as it is scientifically and economically relevant. As mentioned by EFSA in the GD (p.106), no difference in honey production should be observed as effects on the colony are supposed to be negligible. We fully support this assertion as honey production is a proof of a healthy colony.

Finally, we are highly concerned by the withdrawal of EFSA's initial proposal to include a homing flight test in order to assess sub-lethal toxicity to bees. EFSA justifies this change by the fact that insufficient information is available on the biological relevance of such a test and that no trigger value exists. We acknowledge that scientific work still needs to be carried out in order to establish a trigger value and the effects of disorientation on bees. Nevertheless, homing flight is a complete test as it tests memory, orientation and locomotion so the data provided by the results of such a test would be helpful for risk management in the assessment of the sub-lethal toxicity of a PPP. Furthermore, Henry *et al.* (2012) have set up a protocol to carry out this test in a simple way. Moreover, the lack of knowledge on the biological relevance of such a test on the health of the colony should make it, under the precautionary principle, a mandatory test. We would therefore like to see homing flight tests being included in the mandatory tests, according to Henry *et al.* protocol.

Beyond honey production, we would also like to stress the beekeeping sector's contribution to our society which is here not taken into account, for example: culture, education, genetic resources, agricultural traditions, etc.

³ Desneux *et al.* (2007), Aliouane *et al.* (2008), Girolami *et al.* (2009), Bernardou *et al.* (2009), El Hassani *et al.* (2009), Gauthier *et al.* (2009), Decourtye *et al.* (2009), Alaux *et al.* (2010), Tremolada (2010), Cresswell *et al.* (2011), Apenet report (2011), Aufavre *et al.* (2012), Tapparo *et al.* (2012), Schneider *et al.* (2012), Whitehorn *et al.* (2012), Eiri *et al.* (2012), Pettis *et al.* (2012), Henry *et al.* (2012)

From a more general perspective, we would like to stress that we acknowledge and appreciate the fact that the EFSA bee panel does not present any conflict of interest. We nevertheless regret that only a few bee experts are part of the panel. We would like to see the bee panel coordinating the ring testing of all honey bee toxicity risk assessment methodologies as the majority of them have not yet been ring tested. We therefore suggest that the Commission allocates a budget for this purpose.

Kind regards,

Magda Stoczkiewicz, Friends of the Earth Europe

Francesco Panella, European Beekeeping Coordination

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