2017

Pollinator-friendly

SAN Standard

Sustainable Agriculture Network

The total economic value of pollination worldwide amounted to €153 billion in 2005, which represented 9.5% of the value of the world agricultural production used for human food that year[1] .

Pollinator populations have declined significantly worldwide and more scientific evidence is continuously being added about the negative effect of systemic insecticides on these populations. The focus of the research has been on the three neonicotinoids clothianodin, imidacloprid and thiamethoxam and the phenylpyrazole fipronil. These substances significantly affect bee populations, other pollinators and birds. The Worldwide Integrated Assessment of the Impact of Systemic Pesticides on Biodiversity and Ecosystems (WIA), conducted a large scale review of these insecticides, analyzing over 800 peer-reviewed journal articles published over the last two decades and concluded that:

- Dust created during drilling of treated seeds is lethal to flying insects, and has caused large-scale losses of honeybee colonies.

- When applied as foliar sprays, drift is likely to be highly toxic to non-target insects.

- For bees, consuming contaminated pollen and nectar leads to impaired learning and navigation, raised mortality, increased susceptibility to disease and reduced fecundity. In bumblebees there is clear evidence for colony-level effects.

- Neonicotinoids can leach into waterways and groundwater. Waterways with higher neonicotinoid concentrations have depleted insect abundance and diversity.

- Neonicotinoids can persist for years in soils so environmental concentrations may build up with repeated use with possible impact on soil invertebrates.

- Neonicotinoids are found in nectar and pollen of treated crops and have also been detected at much higher concentrations in guttation drops exuded by many crops.

- Seed-feeding birds may only need to eat a few treated seeds to receive a lethal dose. Lower doses lead to lethargy, reduced fecundity and impaired immune function.

- Wild plants growing near crops can become contaminated with neonicotinoids (via dust, spray or water), with potential impacts on a broad range of invertebrates living on farms.

The SAN 2017 Sustainable Agriculture Network Standard is the first in responding to these findings with two effective provisions:

1. The SAN prohibition of the three neonicotinoids clothianodin, imidacloprid and thiamethoxam and the phenylpyrazole fipronil on certified farms after July 2020.

2.Insecticides with pollinator risk if science-based risk mitigation requirements are implemented.

1 The study published in ECOLOGICAL ECONOMICS used FAO and original data to calculate the value of the pollinator contribution to the food production in the world.

2020 neonics phase-out

The insecticides clothianodin, imidacloprid, thiamethoxam and fipronil are some of the most used pesticides in tropical agriculture. Due to economic and government policy limitations to substitute them with less toxic but equally effective alternatives, SAN is establishing a phase-out period for the use of these substances on certified farms until June 30, 2020. This 2020 neonics – phase-out has been consulted with stakeholders from Europe, West Africa (cocoa sector), India (tea sector) and Latin America (coffee and cattle sectors) during 2015 and 2016. SAN is reaching out to research centers, government institutions, producer sectors and agrochemical companies to find economically feasible alternatives for these four substances and promote the development of new integrated pest management programs for producers implementing the SAN 2017 standard.

Science-based risk mitigation for insecticide use

Results from a scientific risk assessment of the Oregon State University's Integrated Plant Protection Center are reflected in the SAN standard criteria that authorizes the use of insecticides with proven risk to bees and other pollinators, only if farms comply with the following SAN risk mitigation criteria:

- The mandatory implementation of an Integrated Pest Management plan that avoids or reduces the use of systemic insecticides.

- No spraying of these insecticides when crops that provide nectar to pollinators are flourishing.

- Avoiding the spray drift of insecticides to the core habitats of pollinators (natural ecosystems and flowering weeds) through non-spray zones and the establishment of vegetative barriers.

- The restoration and conservation of more native vegetation for a more diverse agroecosystem that provides more food resources and reproduction sites for pollinators and other beneficial insects.

- If bee hives are used, they are temporarily covered during application, and hive bees are provided with a clean water source outside the treated area.

Integrated pest management of crop and cattle farms is only possible if the use of systemic insecticides will be phased out soon. The use of neonicotinoids on certified farms has no long-term justification to form part of the sustainable management of banana, cocoa, coffee, tea, cattle and other farms.

SAN believes that standards have to prescribe more specifically how to effectively reduce the risk of insecticides to pollinators and other beneficial insects. The 2010 version of the SAN sustainable agriculture standard was the first in prohibiting the use of the insecticide endosulfan on certified farms after July 2012. Only a few years later, the SAN 2017 Standard follows this case announcing the use prohibition of clothianodin, imidacloprid, thiamethoxam and fipronil after July 2020.