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News Release

Focus on the health of honey bee and bumble bee colonies as well as wild bees:

Bayer announces publication of a series of scientific reports on large-scale landscape study looking into neonicotinoid bee safety

Clothianidin-treated oilseed rape does not impact the health of bees

Monheim, October 17, 2016 – Bayer has announced the publication of a series of scientific publications on a large-scale landscape study into the bee safety of neonicotinoid seed treatment conducted in Mecklenburg-West Pomerania, a state in northern Germany. The study was commissioned by Bayer and conducted with various scientific partners. The aim was to assess the potential effects of oilseed rape grown from clothianidin-treated seeds on bee species with different life cycles, such as the honey bee (*Apis mellifera*), a bumble bee (*Bombus terrestris*) and a solitary bee species (*Osmia bicornis*).

The six scientific publications recently appeared online on *Ecotoxicology*, providing detailed information on the scope, performance and results of the study.

“Together with external researchers, we have initiated one of the largest and most comprehensive landscape-level studies ever conducted for bees,” said Dr. Richard Schmuck, director of Environmental Safety at Crop Science, a Division of Bayer. “The results demonstrate that the previously authorized seed treatment of oilseed rape with clothianidin does not harm colonies of honey bees and other bee species.”

“Detailed analysis of collected pollen and nectar samples demonstrated that the exposure of bees foraging in treated oilseed rape fields to clothianidin was low and that the residue levels in nectar and pollen were within the typical range of residue levels observed in previous studies,” explained Dr. Fred Heimbach, Senior Expert Ecotoxicology at tier3 solutions, a contract research organization, and coordinator of the study. “It has made

clear that seed treatment of oilseed rape is not harmful to honey bee and bumble bee colonies and the investigated solitary bees."

Impressive scale of study

Mecklenburg-West Pomerania was selected as the location for this large-scale field study because approximately one quarter of the entire arable land of this state in northern Germany is planted with winter oilseed rape. The study sites and conditions were representative of key oilseed rape-growing areas in Europe.

In 2014, oilseed rape seed dressed with clothianidin was sown on a total area of 800 hectares in a 65 km^2 trial area, and untreated seed was sown on roughly 600 hectares in a reference area that was likewise 65 km^2 in size. The distance between the treatment and the control areas was, however, large enough to prevent cross-foraging of pollinators.

The parameters investigated at the treatment sites were the composition of the pollen collected by the bees, residue levels of clothianidin in pollen, nectar and honey, colony development of the bumble bees, colony strength, development, honey production and health of the honey bees and the reproductive performance of the solitary bees. The study showed no adverse effects under field conditions in any of the assessed parameters.

Literature reference

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