HONEY AND BUMBLE BEE
SEMI FIELD AND FIELD

STRONGER TOGETHER
Welcome to Eurofins Agroscience Services

We are a leading provider of product development consultancy and technical support to the crop protection industry. Our technical activities involve conducting field and laboratory studies to determine the safety and efficacy of new agrochemicals and crop varieties. With over 25 years of experience, Eurofins Agroscience Services offers outstanding technical knowledge and project management skills. By acquiring a carefully selected range of CRO’s, we have created a unique portfolio of expertise that provides analytical, regulatory and field support to plant breeders, agrochemical, biopesticide, biocide and fine chemical manufacturers.

Eurofins Agroscience Services offers a wide range of honey and bumble bee studies following standard or special designs. All studies are planned and performed by a highly experienced team of scientists and technical personnel. The bee studies (Apis mellifera L., Bombus terrestris) are conducted according to current OEPP/EPPO, CEB and OECD guidelines under semi-field and field conditions throughout Europe (e.g. Germany, Spain, France, Italy, Denmark and Greece) as well as in China, USA and Brazil.

Special study designs include long-term studies with over-wintering, studies in the relevant crop (e.g. sunflower, citrus, melon, maize, nectarine, peach, apple) where the product comes into its use and residue studies with bees.

Semi-field Studies
Semi-field studies are also called tunnel tests. The crop area covered by each tunnel tent is at least 40 m² with one bee hive placed in each tunnel. In such studies, the honey bee exposure to a treated crop is checked under comparable conditions for the different treatment groups within one test. The crop used is either a bee attractive crop such as Phacelia, rape or the relevant crop. As standard, bee flight, bee mortality and the condition of the colonies are assessed.

Portfolio
- Standard studies according to OEPP/EPPO Guideline No. 170
- Brood test according to OECD guidance document number 75
- Simulation of aphid honeydew on wheat (according to CEB draft Guideline No. 230)
- Coated seeds – effects of guttation or dust

Field Studies
In accordance with current OEPP/EPPO Guidelines, fields of at least 2500 m² up to 3 ha are used for field studies. In each field, four to six commercial bee hives are set-up for further assessments on bee mortality, flight intensity in the crop and behaviour of the bees in front of the hives and crop area. The condition of the colonies as well as the brood development is recorded once before and frequently over at least one month after treatment.

Bumble Bee Semi-Field Studies
Eurofins Agroscience Services performs semi-field studies with bumble bees (Bombus terrestris L.) in commercial greenhouses. The objective of the studies is to evaluate the side effects of the test item after application during the flowering period and high activity of bumble-bees. In situations where residual effects are expected, bumble bees can be introduced following a waiting period after the application. Test items can be applied by drip irrigation system and / or by foliar application.

Special Skills
- Dust application (semi-field and field studies) according to the OEPP/EPPO Guideline No. 170
- Honey bee studies from seeding to flowering (dust, guttation, flowering), including long-term examination on the bee colonies
- Residue studies with different crops (e.g. oilseed rape, maize, melon, apple, peach, citrus) under semi-field and field conditions. Samples from a beehive (e.g. nectar, honey, pollen and wax) as well as forager bees collected in front of the hives and samples from the crop can be taken (nectar and pollen from single flowers via capillarity)
- Bumble bee (Bombus terrestris L.) studies are carried out under greenhouse conditions (e.g. in tomatoes) in Spain or Italy

Industry Partnerships
- LAVES Institut für Bienenkunde, Celle
- Länderinstitut für Bienenkunde, Hohen-Neuendorf
- Long-term cooperation with local farmers
- Participations, Memberships; Contacts (e.g. AG Bienenschutz, ICPBR)

Eurofins Scientific Group
Eurofins Scientific is a life sciences company that serves a wide range of industries including the pharmaceutical, agricultural, food and environmental sectors.

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